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Original Communications.

ARTICLE I.—Civil Malpractice. A Report presented to the Military Tract Medical Society, at its Fifteenth Semi-Annual Meeting, Jan. 14, 1873. By M. A. McClelland, M.D., Knoxville, Illinois.

"Men see clearly, like owls, in the night of their own notions, but in experience, as in daylight, they wink and are but half-sighted."—BACON.

"Deep science is desirable to the man of fortune,—useful science to the physician and surgeon."—SIR ASTLEY COOPER.

"Professional employment is not only recognized as a legitimate and substantial business of life, but it is regulated by fixed rules to insure due diligence and skill and its appropriate reward."—SMITH v. HILL, 13 Ark. R. 173.

INTRODUCTION.

Appointed on the Committee on Surgery, at the last semi-annual meeting of the Military Tract Medical Society, to prepare a report on some surgical topic, I considered in what way I could best serve the Association, whether by reporting on some special branch of surgery, on surgical appliances, or upon some of the civil relations surgeons bear to the public. Believing that I should serve our mutual interests best by choosing the last, I selected Civil Malpractice as the subject of my report. What it is, I have endeavored

to show, by collating its definitions from both legal and medical authorities. That the definitions, derived from legal sources, might not lose anything from their completeness, I have transcribed the decisions of the courts in full. Definitions from medical authorities have been somewhat abridged; as those for whom the report is written will have no difficulty in consulting the various authorities cited, they will not, therefore, desire the medical aspect of the case so much in extenso.

Free use has been made of both legal and medical works, and credit accorded the same. Any failure in this respect is due to oversight, which has especially been guarded against.

To Messrs. Craig, Harvey, Sanford, and Kretzinger, of the Knox Co. Bar, I am under obligations for the use of legal authorities. Mr. Kretzinger, especially, rendered me valuable suggestions and advice. T. S. McClelland, Esq., of the Chicago Bar, assisted me materially by furnishing Supreme Court Reports of other States, while my friend, Dr. Reece, of Abingdon, Ill., placed at my command surgical authorities and medical journals not in my own library.

Careful proof-reading has, we believe, kept the transcripts of decisions of the courts free from error, and as these decisions are only accessible in very large law libraries, we trust their presentation here will be of value.

CIVIL MALPRACTICE.

Circulars from our Medical schools very generally announce a course of lectures on Medical Jurisprudence. The announcement implies the promise of lectures upon the subject. How often this promise is kept, the memory of every medical practitioner will answer. The writer hereof, during his preliminary course of study, heard but two lectures upon this branch of medical science.

The import of the first was, that physicians generally received intimation sometime before they were called upon to act as experts in courts of law, or to respond in damages, and they would therefore have time to prepare themselves. The substance of the second was, "Get your fee as soon as possible after the service is rendered, and your patients will be better satisfied as to the result of your treatment."

Exposed as we constantly are to suits that will "ruin not only

our fortunes, but our reputations," we receive too little instruction from our professional teachers, as to what we shall do to protect ourselves in the practice of our profession when once embarked in it. If any one doubts the necessity for an acquaintance with the general principles of the laws bearing upon the practice of Medicine and Surgery, let him consult the case of Alder v. Buckley, 1 Swan's (Tenn.) R. 69, and the other cases cited in this Report, and have his doubts resolved.

State medicine is too extensive, including, as it does, "the application of the principles and practice of the different branches of medicine to the elucidation of doubtful questions in courts of justice," to be considered in a paper of suitable length to be submitted to this Society. I shall therefore limit myself to the principles involved in malpractice.

This term means "an improper discharge of professional duty, either through want of skill or through negligence." The term is not a restricted one, but of wide application. Thus, the improper performance of work, requiring skill and knowledge, in any profession or business, would be designated "malpractice," and laws bearing upon it in all professions would be the same. Duncan v. Blundell, 3 Starkie R. 6. It would seem, however, from certain legal decisions, that more is expected of physicians and surgeons than of any other class of persons. Why should this be? Various reasons might be given in answer. In respect to surgical cases that are investigated in our courts, how frequently we hear surgeons-experts-boasting of the cures they have effected in similar cases; no shortening, no deformity, in their experience; leading the courts, leading juries, leading every one within the sound of their voice, to suppose that perfect cures were and should be the rule, and imperfect cures the exception. How far such statements are borne out by facts, we all well know. also well know, that surgeons, generally, do not report their bad cases of shortening and deformity through our medical journals, hence the paucity of such cases from this source. Again, remarkable cures frequently result without any aid from us, but should we have but just seen the case, we often accept the credit that should have been given to nature alone. By just such a course we have impliedly warranted the perfect recovery of our patients; arrogating to ourselves powers never given to man; and having

so done, we are held to the fulfillment of the contract. Jones on Bailment, 99; 3 Black. Com. 165. Do not understand me to bring these as specific charges against any gentleman of this Society; the charges are general ones, and arise necessarily from the state of our general society, that permits any one to practice our high calling, whether he be fit or no. What course is right for us in the premises? Can we do aught to release our profession from this reproach? Most certainly. In the language of a former President of this Society, (Dr. Reece,) "we can, by being candid in regard to our own deficiencies, claiming no more than we can perform; no more knowledge than we possess; no more for our art than belongs to it." It should ever be borne in mind that, "every surgeon sets a broken limb as he writes his name, after a fashion of his own," and that good results have, and may be obtained by a variety of methods of treatment.

Malpractice may conveniently be divided into two kinds, viz.:

1. "Civil Malpractice," in which patients bring suits for damages which they have, or think they have, sustained.

2. "Criminal Malpractice," in which the People, or State, is made the plaintiff. We shall, in the present paper, limit ourselves to the consideration of the first division of the subject. Having seen what constitutes malpractice, viz., "want of skill and negligence," we shall endeavor, first, to determine, from the rulings and decisions of the courts in adjudicated cases, what the law requires of us as surgeons; and second, what is considered skill and care by our leading authorities in medicine.

In an action for malpractice, the plaintiff always alleges that the defendant was either ignorant, that is, unskillful, or that he was negligent, that is, careless, or that he was both; and, as we shall see, the surgeon has been refused permission on diverse occasions to give proof of his competency—often the issue that is of most importance to him; hence, some of such cases have been taken to the higher courts, where this right has been recognized, and the case sent back for a new trial. It is in the lower courts, and from juries whose prejudices are usually with the plaintiff, that we have most to fear. Many good men occupy seats in our courts, who wish and aim to do right, and either from want of knowledge as to what should be expected of surgeons, or misled by the testimony of witnesses calling themselves "doctors" in medicine,

give very erroneous instructions to juries; as in the case of *Howard* v. *Grover*, 28 *Maine R.* 97, where the jury assessed damages at \$2,000 against the surgeon, not for unskillfully removing the limb, nor for any neglect in its after-treatment, but because in trying to save as much of the limb as possible—a prime principle in surgery—he did *not* remove it a few inches higher up. Here the surgeon was held responsible for an error in judgment. Few of us could follow our profession borne down by such requirements. *McClallen v. Adams*, 19 *Pick.* 333. See also article on "Attorney and Client," *Livingston's Law Mag.*, Aug., 1855.

The law on responsibility of surgeons is well laid down in Hilliard's Law of Torts, vol. 1, p. 253. As it covers pretty generally all the points, alleged in cases of malpractice, I will transcribe it in full. He says: "Under some circumstances, a physician or surgeon will be held very strictly answerable for the consequences of his professional action or neglect. Thus, it is held that where medicine is administered to a slave without the consent of his owner, the physician is responsible for all the evil consequences which result from his act. So an action lies against a surgeon for gross ignorance and want of skill, as well as for negligence and carelessness; though if the evidence be of negligence only, which was properly left to the jury, and negatived by them, the Court will not grant a new trial because the jury were directed that want of skill alone would not sustain the action. But, in general, a physician or surgeon is responsible only for ordinary or reasonable care and skill, and the exercise of his best judgment in matters of doubt; not for a want of the highest degree of skill. It is the duty of the patient to co-operate with his professional adviser, and to conform to the necessary prescriptions; but if he will not, or under the pressure of pain he cannot, he has no right to hold his surgeon responsible for his own neglect. The implied contract of a surgeon is not to cure, but to possess and employ, in the treatment of a case, such reasonable skill and diligence as are ordinarily exercised in his profession by thoroughly educated surgeons; and in judging of the degree of skill required, regard is had to the advanced state of the profession at the time. So the law requires of a dentist a reasonable degree of skill and care in his professional operations; and he will not be held answerable for injuries arising from his want of the highest attainments in his profession. So a physician is expected to practice according to his professed and avowed system, where there is no particular system established or favored by law, and no system prohibited. Hence, in an action for malpractice, evidence to prove that the defendant's treatment of the case was according to the *botanic* system of practice and medicine, which he professed and was known to follow, is admissible."

What constitutes "ordinary skill," and what is proof of it? The phrase is a difficult one to define. There is no standard of comparison by which the question can be governed. Each individual case must stand upon its own merits. Time and place must be taken into consideration. As much cannot be expected of · the physician in remote localities, where he is cut off from opportunities of improvement, as from physicians living in communities where opportunity is afforded of seeing disease and accidents under more varied forms; nor from this latter class will as high a degree of attainments be exacted as from physicians connected with large hospitals, or who reside in large cities. If it were otherwise, we should find but few physicians, except in populous communities. Braunburger v. Cleis, Am. Law Reg., 1864-5, 587. The least amount of skill, therefore, with which a fair proportion of the practitioners of a given locality are endowed, is taken as the criterion by which to judge the physician's ability or skill. I Bouvier's Inst., § 1004-5. In proof of this degree of attainment, a diploma is the best evidence, but to be valid it must be proven that the college from which it emanated had corporate authority to grant degrees in medicine at the date of giving the degree, and if the college of another State, its act of incorporation must be offered as proof of its authority to grant such degree. Ordronaux, Med. Jurisprud. 26; Hunter v. Blount, 27 Georgia, 76; Hill v. Bowdie, 2 Stewart & Porter, 56. It must be borne in mind, also, that courts will take no notice of the different schools in medicine, the term "physician" being legally assumed by any one who chooses to announce himself as a practitioner of medicine. Sutton v. Tracy, 1 Mich. 243; Reynolds v. Graves, 3 Wis. 416. The law recognizes all systems as legitimate; at the same time it requires the physician to practice according to his professed and avowed system. A departure from the received canons of a given

system will be taken as a want of ordinary skill. Bowman v. Woods, I Iowa, 441; Patten v. Wiggin, 51 Maine, 594.

The Supreme Court of New York has decided, (Ex parte Paine, 1 Hill, 665,) that, "whoever offers to practice either homoeopathy or allopathy, as his patients may wish, is practically a quack in his profession." This is but a single phase of it. The American Medical Association, in defining the duties for the support of professional character, takes a more general, and consequently more just, view of the above question. Sections 3-4 declare it "to be derogatory to the dignity of the profession to resort to public advertisements, or private cards, or hand-bills, inviting the attention of individuals affected with particular diseases; publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or to suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies; to adduce certificates of skill and success; or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

"Equally derogatory to professional character is it, for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret nostrum, whether it be the composition or exclusive property of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality, and if mystery alone gives it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them."

Any one violating the above provisions would be designated a "quack;" so, also those practitioners of the "Specific School," those transcendental pathologists, who consider as signs of the same disease, and as possessing equal value, the following symptoms: "Insatiable thirst; pallor of the face; scrofula; sweating of the head after sleep; burning in the palms of the hands; frequent attacks of suffocation; furuncles; vomiting of blood; hiccough after eating or drinking; cutting pain in the rectum while at stools; absence of venereal desire; unbridled lusts; somnolency during the day after eating; paroxysms of anger bordering on mental

alienation; tears frequently at the slightest causes," etc., etc.; and who assure us in their therapeutics, that the administration of the 1,000,000,000,000,000,000,000,000 of a grain of carbonate of lime—common chalk—produces no less than a thousand and ninety symptoms, from which I select the following: On the fifth day, "itching on the border of the eyelids; thirteenth day, in the evening, on going out, unsteady gait; seventeenth day, ardent venereal desires, especially during a walk before dinner; twenty-first day, great heat at the extremity of the big toe; twenty-eighth day, itching at the anterior part of the glans penis, after urination," and so on, ad nauseum.

What else can we call them but "quacks,"—ignorant pretenders to knowledge they do not possess? Is this overstrained? Read the history of medicine. I must ask pardon for this digression. The law seems inclined to make definitions. Legitimate medicine demands the same right, especially in its own peculiar province.

ADJUDICATED CASES.

The case of *Bowman* v. *Woods*, 1 *Iowa*, 441, is a fine illustration of what these self-styled reformers are doing in the profession of medicine, and as it also illustrates some important points in law, I quote it entire.

The opinion of the court was given by GREEN, J.

"The proceedings below were against Bowman for malpractice as a physician in a case of accouchment. Verdict for the plaintiff, and his damages assessed at \$50. The bill of exceptions gives the substance of a Dr. Coffin's testimony, who, it appears, was called in asconsulting physician about thirty-six hours after the delivery. At that time Dr. Coffin states that 'the afterbirth was not removed, and the patient was greatly prostrated by the severity of the labor and loss of blood; that she was also suffering from a distension of the bladder, which had not been evacuated since parturition. He gave it as his opinion that the placenta, and the distended state of the bladder, should have been removed at a much earlier period, and that such delay would be likely to produce puerperal fever. Several other physicians, as witnesses, concurred in Dr. C.'s view of the practice.'

"The defendant then offered to prove that he was a botanic physician, and that according to the botanic system of practice and medicine, it is considered *improper* to remove the placenta, and that it should be permitted to remain till expelled by efforts of nature. But the proof of these facts being objected to, was ruled out by the court. In this we think there is error. As yet there is no particular system of medicine established, or favored, by the laws of Iowa; and as no system is upheld, none is prohibited.

"The regular, the botanic, the homoeopathic, the hydropathic, and other modes of treating disease, are alike unprohibited; and each receives more or less favor and patronage from the people.

"Though the regular system has been advancing as a science for centuries, aided by research and experience, by experience and skill, still the law regards it with no partiality or distinguishing favor; nor is it recognized as the exclusive standard or test by which the other systems are to be adjudged. The evidence of the experienced practitioner of either system, is equally admissible in giving opinions upon questions of medical skill. But in the question before us, the objection does not appear to be the disqualification or skill of the witnesses, but rather the facts which the defendant proposed proving by them. In these facts we can see nothing irrelevant or inadmissible; and asymatter of defense to the jury, the defendant was entitled to the benefit of them. A person professing to follow one system of medical treatment cannot be expected by his employer to practice any other. While the regular physician is expected to follow the rules of the old school in the art of curing, the botanic physician must be equally expected to adhere to his adopted method. But on the part of every medical practitioner, the law implies an undertaking that he will use an ordinary degree of care and skill in medical operations, and he is unquestionably liable for gross carelessness or unskillfulness in the management of his patients; and still the person who employs a botanic practitioner has no right to expect the same kind of treatment or the same kind of medicine that a regular physician would administer. The law does not require a man to accomplish more than he undertakes, nor in a different manner from what he professes. Therefore, in this case, if the defendant below could show that he was employed as a botanic physician, and that he performed the accouchment with ordinary skill and care, in accordance with the system he professed to follow, we

should regard it as a legal defense. It should show a full compliance with his profession and undertaking, and if injury resulted from it to the plaintiff, he could properly blame no one but himself. Story, in his work on Bailment, Sec. 435, says: 'But even where the particular business or employment requires skill, if the bailee is known not to possess it, or he does not exercise the particular art or employment to which it belongs, and he makes no pretension to skill in it; then if the bailor, with full notice, trusts him with the undertaking, the bailee is bound only for a reasonable exercise of the skill which he professes, or of the judgment which he can employ; and if any loss ensue from want of due skill, he is not chargeable. Thus,' (to put a case borrowed from the Mohammedan law,) 'if a person will knowingly employ a common matmaker to weave or embroider a fine carpet, he may impute the bad workmanship to his own folly. So if a man having a disease in his eyes, should employ a farrier to cure the disease, and he should lose his sight by the remedies prescribed in such cases for horses, he certainly would have no cause for complaint.'

"Judge Story then goes on to state, that in all such cases the employer ought properly to attribute the loss or injury to his own negligence and mismanagement. The case of the Commonwealth v. Thompson, 6 Mass. 134, exhibits a revolting case of malpractice in which lobelia was administered to such indiscriminate excess as to produce death. Still it was held, that if a medical pretender administers medicine to his patient with an honest intention and expectation of cure, but which causes death, the party prescribing cannot be adjudged guilty; and that 'there is no law which prohibits any man from prescribing for a sick person, with his consent, if he honestly intends to cure him by his prescription.'

"The people are free to select from the various classes of medical men, who are accountable to their employers for all injuries resulting from a want of ordinary diligence and skill in their respective systems of treating diseases. It is to be lamented, that so many of our citizens are disposed to trust health and life to novices and empirics, to new nostrums and methods of treatment. But these are evils which courts of justice possess no adequate power to remedy. Enlightened public opinion and judicious legislation, may do much to discountenance quackery and advance medical science.

"The only other error assigned in this case, which we deem it necessary to notice, is in relation to the admission of medical books as evidence. It appears that the defendant offered to introduce certain medical books, which witnesses had declared as standard works on botanic medicine, and from which they claimed to have derived much of their professional knowledge, but, on objection, the court excluded them. The authorities on this point are not uniform; but the district judge decided in conformity to the prevailing decisions of at least the English courts. In the case of Collier v. Simpson, 5 C. & Payne's N. P. R. 73, it was decided that medical books are not admissible in evidence, though professional witnesses may be asked the grounds of their judgment and opinion, which might in some degree be founded on these books as a part of their knowledge.

"Judge Abbot, in the trial of Donal for poisoning, refused an appeal to the works of Thenard, and said, 'We cannot take the fact from any publication, we cannot take the fact as related by any stranger.' But in the trial of Spencer Cooper, the court permitted medical authorities to be read, (Guy's Forensic Medicine, 11); and Dr. Beck, in his excellent work on Medical Jurisprudence, vol. 2, p. 666, states, that in this country an objection has never been made to the introduction of authority, or the observation of others, as testimony, by medical men. In this we think the author mistaken, for an appeal to medical authorities has been disallowed by some of the courts of this country; though physicians, when testifying, are permitted to refer to medical authors, and to quote their opinions from memory. Being permitted to refer to and quote authors, we can see no reason why they may not read the views and opinions of distinguished authors. The opinion of an author as contained in his works, we regard as better evidence than the mere statement of those opinions by a witness, who testifies as to his recollection of them from former reading. Is not the latter secondary to the former? On the whole we think it the safer rule to admit standard medical books as evidence of the author's opinions upon questions of medical skill or practice, involved in a trial. This rule appears to us the most accordant with well established principles of evidence." Judgment reversed.

The ruling above, so far as it relates to the admission of medical books in evidence, is eminently just. It is from our teachers, and from our medical authorities, that we form our opinions and draw our conclusions in a vast majority of cases. There are often cases in our courts, concerning which our personal experience does not enable us to form opinions, and we certainly should at least be permitted to show that our opinions, when not formed from our experience, are sustained by the written experience of eminent men in our profession. Professor Lee remarks, that, "Medical testimony when of any value, is but little else than a reference to authority."

The rules of law governing cases of malpractice in Illinois, are laid down in the cases of *Ritchey* v. West, 23 Ill. 385, and Lowe v. McNevins, 40 Ill. 209. The opinions of the court in these cases are here given in full.

The evidence in the court below, before the jury in the last mentioned case, was that the plaintiff's (McNevins') arm was broken in the elbow-joint. The defendant (Lowe) bound up the arm with a bandage, and said it was all right; told Mr. and Mrs. McNevins to wet it frequently with vinegar and wormwood. He then left, and did not return to see his patient for several days. When he called again, he examined the arm, and said it was doing well. Mrs. McNevins discovered that the bones were sticking up, and sent for the defendant. He came and examined the arm again, and still claimed it was all right; that the bone which stuck up was attached to the skin and would come all right; and that they must rub it with oil. He said, also, that the patient would outgrow the deformity in five or six days. Said he had cured a broken leg in New Boston, that Drs. Willits and Harrell could not cure; also told of the great cures he had performed in Wisconsin, where he had a large practice. The jury found for the plaintiff; damages, \$700. Appealed.

Lowe v. McNevins, 40 Ill. 209. THOMPSON, J. Mr. Justice LAWRENCE delivered the opinion of the court.

"This was an action brought against the appellant for malpractice as a surgeon and physician. In the third and fourth instructions for the plaintiff, the court told the jury that the defendant, if he held himself out as a physician, was liable for whatever damage may have accrued to the plaintiff by reason of any want of care or skill on his part, whether he charged fees or not. This states the responsibility of the physician too strongly, as it requires the highest degree of care and skill, whereas only reasonable care and skill are necessary.

"As to the payment of fees, the instruction is unobjectionable. If a person holds himself out to the public as a physician, he must be held to ordinary care and skill in every case of which he assumes the charge, whether in the particular case he has received fees or not. But if he does not profess to be a physician, nor to practice as such, and is merely asked his advice as a friend, or neighbor, he does not incur any professional responsibility. The case of Ritchey v. West, 23 Ill. 385, is to be understood in this sense. The judgment must be reversed because the instructions required the highest degree of care and skill." Judgment reversed.

This case was finally settled for \$200, pending a new trial.

The case referred to in the above decision, was a suit brought by defendant in error, against plaintiff in error, to recover for injuries arising from negligence and lack of skill of the plaintiff in error, in the practice of his profession of physician and surgeon. The case was tried in the Adams Circuit Court, Sibley, J., presiding.

Ritchey v. West, 23 Ill. 385. WALKER, J. "No question can arise on the correctness of the decisions of the court below, in admitting or rejecting evidence, in this case, as no exceptions were preserved in the record.

"The principle is plain and of uniform application, that when a person assumes the profession of physician and surgeon, he must in its exercise be held to employ a reasonable amount of care and skill. For anything short of that degree of skill in his practice, the law will hold him responsible for any injury which may result from its absence. While he is not required to possess the highest order of qualification to which some men attain, still he must possess and exercise that degree of skill which is ordinarily possessed by members of the profession. And whether the injury results from want of skill, or want of its application, he will, in either case, be equally liable. This, the law implies, whenever a retainer is shown; but when the services are rendered as a gratuity, gross negligence will alone create liability.

"This, then, presents the question, whether the evidence in the case establishes a want of ordinary skill or reasonable care, in the

treatment of this case. The retainer having been proved, it is not material to inquire whether the case shows gross incompetency or neglect of duty. The concurring evidence of all the physicians. shows that the splints and bandages were not properly applied. Had they extended below the wrist, the evidence seems to show that they would have confined the wrist to its proper place. probable that such a practice would have tended, notwithstanding the fracture, to have held the broken bone more nearly to its place until a union was formed, and thus have prevented, to some extent. if not altogether, the deformity and disability to use the hand. The physicians also agree that the splints employed were not of sufficient width, as well as too short, for the treatment of the fracture, even if they had been midway between the wrist and elbow, as he supposed. And from this evidence it would seem that there must have been a want of ordinary skill or great negligence in the treatment of the case, in not detecting the dislocation of the wrist joint. The physicians all agree that this portion of the injury could have been easily detected by ordinary care and skill, and the fact that it had been and was still dislocated, was afterwards detected by a person who did not profess surgery or skill in such matters, and had previously only had slight experience in cases of fractured limbs. Then if the evidence of the medical men who were examined as witnesses, is to be credited, and it is supported by the fact that the dislocation of the wrist was detected by a person professing to have no skill, there was a want of ordinary care, or skill, or both, manifested in the treatment of the case.

"The medical witnesses all testify that it is customary and necessary for the surgeon to pay a second visit, for the purpose of ascertaining how the case is progressing, and whether further treatment is required, unless it be dispensed with by the patient. There was no conflict in the evidence, that the plaintiff in error was requested to return, which he agreed to do, for the purpose of further examination, on the following day, and that he never afterwards returned. Then the fact is established by the evidence, that he not only promised to return, but that it was his duty to have done so, unless notified that such attendance would be dispensed with. Then if this was a part of his professional duty, its omission establishes a want of reasonable care and diligence, which, together with his failing to comply with his agreement to

return, must render him liable for all injury which has resulted from its non-observance. Had he returned, as his duty and his agreement required, in all probability the visit would have resulted in detecting the true situation of the injury, and relief might then have been obtained by the employment of the necessary surgical aid. The court therefore did right in refusing the twelfth instruction asked for by plaintiff in error, as it assumed that it was not his duty to again visit defendant in error.

"It is likewise urged, that the court below erred in refusing to grant a new trial on the affidavit of newly discovered evidence. The facts alleged in the affidavit to have been newly discovered, were only cumulative. The question tried by the jury was, whether the wrist was fractured and dislocated at the time when the plaintiff in error was called to treat the injury. The theory of the defense was, that the wrist was not then injured. This evidence which is said to be newly discovered, if it had been produced, would have only tended to show that the wrist received no injury at the time he was called for medical advice. The evidence of the witnesses of defendant in error was, that the wrist was then injured, and from which it had never recovered, and the newly discovered evidence was only rebutting, and was cumulative to his other evidence of that character.

"But if this were not true, the affidavit was fatally defective in not stating that the evidence, said to be newly discovered, was true. If he was unable himself to swear to its truth, he should have produced the affidavits of the witnesses themselves, to satisfy the court of such truth. In an application for a new trial because of newly discovered evidence, it is not sufficient for the party to state that he has been informed and believes that the witnesses will testify to the facts, but the truth of such facts must be verified by affidavit. Otherwise but few cases would occur, in which a party might not procure some person to state that he would on the trial swear to the necessary facts to procure the new trial, and yet, when placed on the stand, wholly fail to testify in accordance with such statement. Such a practice would be liable to great abuse, and should not therefore be adopted.

"Upon the whole of this record we are unable to perceive any error for which the judgment of the court below should be reversed, wherefore the same is affirmed."

The law regarding what is required of the plaintiff in a suit against a physician for malpractice, is laid down in the case of Patten v. Wiggin, 51 Maine, 594, as follows:—opinion of the court containing, also, a clear statement of what the law requires of surgeons.

Action, Assumpsit on account annexed. One portion of account is for professional services as a physician, in attendance on defendant's minor son. The defense to this portion of the claim was malpractice in the treatment of the patient, and such ignorance, want of skill and judgment on the part of the plaintiff in managing professionally the case under his care, that the patient was more injured than benefited by his treatment, and that on the whole case he was not reasonably entitled to recover anything for his services.

Evidence was introduced on both sides as to such treatment and management by the plaintiff during the whole time the patient was under his care. The court (Judge Kent) instructed the jury that, if the plaintiff had been guilty of malpractice, or neglect, or want of ordinary care and skill, within the rules hereafter stated, it would be a defense to that part of the claim which related to the treatment of defendant's son, and the court instructed the jury as follows:

"I. When a man offers himself to the public, or to patients, as a physician or surgeon, the law requires that he be possessed of that reasonable degree of learning, skill, and experience, which is ordinarily possessed by others of his profession who are in good standing as to qualification, and which reasonably qualifies him to undertake the care of patients."

This rule does not require that he should have the highest skill, or largest experience, or most thorough education, equal to the most eminent of the profession in the whole country; but it does require that he should not, when uneducated, ignorant and unfitted, palm himself off as a professional man, well qualified, and go on blindly and recklessly to administer medicines, or perform surgical operations. The rule above stated is the true one.

But the physician qualified within this rule, may be guilty of negligence or malpractice.

"2. The law requires and implies, as part of the contract, that when a physician undertakes professional charge of a patient,

he will use reasonable and ordinary care and diligence in the treatment of the case.

"3. The law further implies, that he agrees to use his best skill and judgment, at all times, in deciding upon the nature of the disease, and the best mode of treatment, and the management generally of the patient.

"The essence of the contract is, that he is to do his best—to yield to the use and service of his patient his best knowledge, skill and judgment, with faithful attention by day and by night as reasonably required. But there are some things that the law does not imply or require. He is not responsible for want of success in his treatment, unless it is proved to result from want of ordinary care or ordinary skill and judgment. He is not a warranter of a cure, unless he makes a special contract to that effect. If he is shown to possess the qualifications stated in the first proposition, to authorize and justify him in offering his services as a physician, then, if he exercises his best skill and judgment, with care and careful observation of the case, he is not responsible for an honest mistake as to the nature of the disease, or as to the best mode of treatment, when there was reasonable ground for doubt or uncertainty.

"If the case is such that no physician of ordinary knowledge or skill could doubt or hesitate, and but one course of treatment would by such professional man be suggested, then any other course of treatment might be evidence of a want of ordinary knowledge or skill, or care and attention, or exercise of his best judgment, and a physician might be held liable, however high his former reputation. If there are distinct and different schools of practice, as Allopathic or Old School, Homœopathic, Thomsonian, Hydropathic or Water Cure, and a physician of one of those schools is called in, his treatment is to be tested by the general doctrines of his school, and not by those of other schools. It is to be presumed that both parties so understand it. The jury are not to judge by determining which school, in their own view, is best. Apply these rules to the evidence.

"Then, as to medical and surgical treatment of the case—was there, or was there not a want of ordinary skill and judgment, such as to render the plaintiff liable within the above rules—such evidence as satisfies you that he either did not possess the education, judgment and skill, which authorized him to undertake the case and enabled him to treat it with ordinary skill, or that he was guilty of that neglect or carelessness in the treatment or investigation of the case which showed that he did not faithfully and honestly apply his skill and knowledge, and best judgment."

Defendant requested the court to give the following instruction:

"A physician who, upon request and in consideration of being paid for his services, takes charge of the case of a diseased person, warrants that he possesses and promises to exercise the knowledge, skill and care requisite to enable him to understand the nature of of his disease, and to treat it properly, but the degree of such knowledge, skill and care, is not that which is possessed and exercised by physicians of the highest knowledge, skill and care, but it is that possessed by physicians of ordinary knowledge, skill and care."

The judge declined to give this, except as given in former instructions.

The judge in his charge also instructed the jury, that in cases where authorities differ, or "doctors disagree," the competent physician is only bound to exercise his best judgment in determining which course is, on the whole, best.

Verdict for plaintiff for the amount of his bill, to which rulings and refusals the defendant excepted.

The case on the exceptions was argued before the Law Court, at the May term, 1862, and the rulings of the judge at the trial were sustained.

The opinion of the court was drawn up by APPLETON, C. J.

"The instructions given were correct. A plaintiff in a suit against a physician for malpractice, must prove that the defendant assumed the character and undertook to act as a physician, without the education, knowledge and skill, which entitled him to act in that capacity; that is, he must show that he had not reasonable or ordinary skill; or, he is bound to prove, in the same way, that having such knowledge and skill, he neglected to apply them with such care and diligence, as, in his judgment, properly exercised, they must have appeared to require; in other words, that he neglected the proper treatment from inattention and carelessness. Leighton v. Sargent, 7 Foster, 460. The same facts which would

authorize a recovery for malpractice would constitute a defense in a suit for professional services. Physicians do not warrant the success of their prescriptions. 'The law,' remarks Mr. Justice Woodward, in McCandless v. McWha, 22 Penn. 261, 'demands qualifications in the profession practical; not extraordinary skill, such as belongs only to few men of rare genius and endowments, but the degree which ordinarily characterizes the profession.' The same views of the law were laid down in Simonds v. Heny, 39 Maine, 155.

"The instructions given were in accordance with the settled principles of law. The one requested had been given in substance. If other instructions had been desired, they should have been requested." Exceptions overruled.

RICE, CULLING, DAVIS, and KENT, J. J., concurred.

Wilmot v. Howard, 39 Vermont, 447.

This was an action on the case against the defendant for damages occasioned to the plaintiff by want of skill of the defendant as a surgeon, in setting the plaintiff's arm, and for negligence and inattention to the same after it was set.

Plea, the general issue, and trial by jury, June term, 1866.

The plaintiff is the minor son of the next friend, Daniel C. Wilmot, and was, at the time of the injury complained of, about seven years of age, and resided with his father.

The counsel for the plaintiff introduced evidence tending to show, that about the 9th of June, 1863, the plaintiff fell and broke one of the bones of the forearm, and that the father of the boy took him to the defendant's, to have his arm set, and otherwise dressed and attended to; that the defendant, who professed to be a surgeon, undertook to set and take charge of the fractured arm; that he did set it, but that in doing so, and in dressing the arm, he did not use ordinary skill, and that by reason of an improper bandage, and putting on the bandage too tight, it caused pain and suffering to the plaintiff, and mortification, decay, and the entire loss of the use of the arm. There was evidence tending to show, that when the defendant set the arm he dressed it by first winding a bandage around the arm very tight, from near the hand to very near or quite to the elbow, then put on the splints outside of this, then another bandage wound around the arm tight from near the

hand to the elbow, over the splints; and the testimony of several practicing surgeons was given, which tended to show that an inner bandage was improper, unnecessary, and detrimental, and that the tight manner in which this was put and kept on, in their opinion, caused the arm to perish and mortify. The plaintiff's counsel further gave evidence tending to prove, that as the father was about to leave the office of defendant, it was, at the defendant's suggestion, agreed and arranged by them-this being Wednesday -that on the succeeding Sunday, the father of the boy should take him to the office of the defendant to have the arm dressed or whatever else its condition should require; that immediately after the arm was set, it became and continued very painful, on account of the improper and unskillful bandage and dressing; that on Friday following, the defendant was passing by the house of the father of the boy, when the father called the defendant in to see the arm; and that he then informed him that the bandage was too tight, and that it caused great pain to the arm, and that it had done so ever since he set it; that the boy had been in great distress and complained of the bandage being too tight, and of great pain in his arm, and called the defendant's attention to the fact that the hand of the broken arm was swollen and blistered on the The evidence tended to show that the hand had become purple, and that the defendant said he would not undo the arm; that he then called his attention to one of the splints being up so high as to interfere with the arm at the elbow, and that the defendant thereupon unbound the outer bandage far enough to slip down the inner splint so that it would not prevent bending the elbow, and put on the bandage again as it was before, after thus adjusting the splint on the inside of the arm.

The plaintiff further gave testimony tending to prove that the defendant then told the plaintiff he need not fetch the boy to his office at all, and agreed to call and see the arm the then next Monday or Tuesday at said Wilmot's; that on the following Tuesday the defendant passed by the house of the plaintiff and did not call, and never after that called upon or saw the arm.

The defendant gave testimony tending to prove that on the Friday when the father of the plaintiff called defendant in to see the arm, it was agreed that the father of the plaintiff, on the succeeding Sunday, should take the plaintiff to the defendant's office to have his arm dressed if it needed dressing, and that the defendant did not agree to call at the house of the father of the plaintiff.

And the defendant further introduced testimony tending to prove, that on several occasions, one of which was on the next Sunday succeeding said Friday, the father of the plaintiff, not in the presence of the defendant, told individuals that he had agreed to take the plaintiff to the defendant's office on the next Sunday after the said Friday to have the arm examined and dressed, if it needed dressing.

Wilmot testified that he never made any such statement, but admitted that he had stated, on one or two occasions, that at the time the defendant first set the arm, it was understood he was to take the boy to the defendant's office the next Saturday or Sunday after it was first set by the defendant. It was admitted on the part of the plaintiff, that the plaintiff was not taken to the defendant's office, as the defendant claimed the agreement was, and that the defendant was not called upon or requested, after said Friday to attend upon the plaintiff, and that the defendant never did see or attend upon the arm after that time.

The testimony on the part of the plaintiff tended to prove, that the arm was not well and properly dressed, and that the plaintiff has lost the use of his arm by reason of the want of proper skill in setting the same, on the part of the defendant, and by reason of negligence and inattention to the same, on the defendant's part after it was set.

The defendant's testimony tended to prove that the plaintiff's arm was well and skillfully dressed and set, and that the loss of the use of the arm resulted from the peculiar injury of the same, at the time it was broken, and from the fault and negligence of the father of the plaintiff in not bringing the plaintiff to the office to be dressed and attended to as he had agreed to do, and from other want of proper care and attention.

There was other evidence as to what was said and done and agreed upon when the defendant came into the father's house on Friday to see the arm, upon the part of both parties; also as to the effect of the defendant's treatment, the injury to the arm on account of the manner of dressing, negligence, etc., of the defendant, and the treatment by other surgeons.

The counsel for the defendant claimed to the jury in argument

that if the damage to the arm resulted in whole or in part from the mismanagement and negligence of those having the care and management of the plaintiff, that the plaintiff is not entitled to recover; and stated to the jury that he presumed the court would so charge. The court treated this as properly raising and presenting the question. The court did not so charge.

No other requests were made by the defendant's counsel.

The court charged the jury fully upon all points presented by the evidence, and no exceptions were taken to any neglect or omission to charge, or to the charges as given, except as heretofore In the course of the charge the court told the jury that there was an implied obligation on a man who holds himself out to a community as a surgeon, and practicing that profession, that he should possess the proper skill in surgery, that is, not the highest degree of skill that by study and experience the profession is susceptible of, or that is possessed by the most eminent surgeons, but the ordinary skill of the profession generally, such degree of knowledge and skill as surgeons commonly possess, such as is common among surgeons who practice that profession; but that want of such skill would not make the surgeon liable, unless it was also shown that the injury complained of resulted from and was caused by the want of such skill as a surgeon is required to possess.

The defendant's counsel excepted to this charge, so far as it relates to the degree of knowledge and skill a surgeon should possess.

As to the declarations of Daniel C. Wilmot, which the defendant claimed to have proved, to the effect that he, Wilmot, had agreed on that Friday to take the boy to the defendant's office the next Sunday thereafter, no request was made to charge in relation to the evidence as to such declarations, but both of the counsel who argued the case for the defendant, stated to the jury that they did not claim that such declarations were evidence in chief to prove the fact of such agreement, but that they were evidence tending to discredit and impeach Daniel C. Wilmot, and the case was so argued to the jury on both sides, and the court so charged the jury. After the court had charged the jury, the defendant's counsel excepted to the charge on this point, claiming then that such subsequent declarations of Daniel C. Wilmot were evidence

in chief. The court then informed defendant's counsel that the charge was as they claimed in their argument to the jury, but that the court would state in the exceptions the facts, so that the Supreme Court might decide whether under such circumstances they were entitled to have their exceptions allowed, and if so, the error, if any, might be corrected by the Supreme Court. The facts were stated for that purpose.

As to what the defendant's counsel claimed, as heretofore stated, as to the effect of mismanagement, negligence, or want of proper care and attention on the part of the plaintiff, and those, other than the defendant, having the care and management of him, the court charged the jury, as to this branch of the case, and its effect on the rights of the parties and upon the damages to the satisfaction of the defendant, and so that no exception was taken, except the court did not charge that if damage or injury resulted, in part, from the mismanagement and negligence of those having the care and management of the plaintiff, that the plaintiff could not recover,—and for the omission so to charge, the defendant excepted.

The jury returned a verdict for the plaintiff. Appealed.

For the defendant:—The negligence of those having the care, charge and custody of the plaintiff was not merely *permissive*, like permitting, negligently, a child to play in the public highway, or otherwise be in the way of danger; but is active, affirmative negligence.

In a case of mere permissive negligence,—permitting a child to be improperly in the highway,—it was held in Robinson v. Cone, 22 Vt. 213, that if the child were injured by the negligence of the defendant, he would not be precluded from his redress; that if the defendant knew the child was in the highway, he was bound to exercise proportionate watchfulness and the utmost care. That case was decided mainly upon the authority of the case of Lynch v. Nurdin, 1 Ad. & El., N. S. 28 (41 E. C. L. 422), in which a similar decision had been made. And the similar decision in Birge v. Gardiner, 19 Conn. 507, was also made upon the authority of Lynch v. Nurdin; and upon the authority of these two cases, and upon a like state of facts, the same decision has since been made in Connecticut in the case of Daley v. Norwich & Worcester R. R. Co., 26 Conn. 91. But the case of Robinson v. Cone is opposed

to the decision in Hatfield v. Roper, 21 Wend. 614, and to the decision in Wright v. Malden & Melrose R. R. Co., 4 Allen, 283, in both of which, negligence on the part of the parents in allowing the child to be in the way of danger, was held to preclude the recovery, by the child, of damages for injury received.

And the case of Lynch v. Nurdin has been questioned in Lygo

v. Newbold, 9 Exch. 502; S. C., 14 Eng. L. & Eq. 507.

But the negligence on the part of the parents in the case at bar is, in its character and consequences, entirely different from the permissive negligence of parents who allow their child to be in the way of danger; and therefore the cases cited above do not control the decisions in this case. Here the parents knew the danger of the child and had the means of preventing the injury, and neglected to use them, and permitted the child to remain in danger, and were also, as the testimony tended to prove, guilty of positive mismanagement in the care of the child.

The case, in its facts, is like the case of Holley v. Boston Gas

Light Co., 8 Gray, 123.

The distinction between the two classes of cases is the differencebetween permitting a child to be in the way of danger, and permitting a child, known to be in danger, to remain in danger.

And there is this further difference between the case of Robinson v. Cone and the case at bar: in Robinson v. Cone the injury to the plaintiff was the result of direct force, exercised and controlled by the defendant; and the reasoning of the court was directed to and upon that state of facts; while, in this case, the negligence on the part of the defendant, if any, consisted in the omission of any affirmative act, and the child was all the time in the care and under the control of its parents.

For the plaintiff:—1. The objection of the defendant that the sayings of the *prochein ami* ought to have been received and considered as testimony in chief, is not well taken. Vaughn v. Porter, 16 Vt: 266.

- 2. The charge of the court as to the degree of knowledge and skill in his profession a surgeon is required to possess, was correct. Patten v. Wiggin, Am. Law Reg., 1862-3, 401; Hilliard on Torts, 253.
- 3. The court did not err in omitting to charge the jury that, "if the injuries resulted in whole or in part from the mismanage-

ment of those having the care and management of the plaintiff, the plaintiff could not recover."

1. Even if that be the law applicable to cases of this sort, the defendant was not, under the circumstances of this case, entitled to that charge.

The defense set up was: 1st. That the arm was well and skillfully set and dressed. 2nd. That the loss of the use of the arm resulted from the peculiar nature of the injury, and from the fault and negligence of the father in not bringing the plaintiff to the defendant's office, to be dressed and attended as he agreed to do, and from other want of proper care and attention.

What evidence was given tending to show want of proper care and attention other than that tending to show that the plaintiff was to be taken to the defendant's office to be treated, which was neglected, the exceptions do not state, but we are to conclude that whatever might have fallen out of that character was disposed of in the course of the charge in connection with the whole evidence to the satisfaction of the defendant, so that the court below considered it of no importance to state. We are to presume that the charge was correct, and sufficiently comprehensive, and that what evidence there might have been tending to show want of care, was properly disposed of by specific directions, as was the evidence in relation to the plaintiff being carried to the defendant's office.

- 2. The exception is not properly before the court. There was no request made that the court would charge in a particular way, and so no refusal. The exception is only to an *omission* to charge. It is not sufficient that the counsel shall say in the course of argument to the jury, that he presumes the court will charge in a particular manner.
- 3. But the proposition is not sound law, to the extent claimed, and so the court was not bound to notice it. Vaughn v. Porter, 16 Vt. 266.

The opinion of the court was delivered by BARRET, J.

"In this action, the plaintiff claims to recover damages for injury sustained by reason of the unskillful and negligent manner in which the defendant dressed, treated and attended the plaintiff's fractured arm.

"A question is made as to the instructions given to the jury touching certain sayings of the plaintiff's father. Those sayings had been treated, by counsel on both sides, in the argument to the jury, as bearing only on the credit of said father as a witness testifying for the plaintiff to material facts in the case. The court, in the charge, had given instructions conformable to the views taken by counsel in the argument. No prior request had been made to the court on this subject. After the charge had been given, the defendant's counsel requested the court to instruct the jury that said sayings of the father were to be regarded and considered as evidence in chief. These facts are certified to this court for the purpose of having us decide whether the defendant was entitled to exception on this point. In the opinion of this court, the defendant was not entitled to exception. If the defendant claimed any special force, or character, or application for this evidence, he should have made it known before the close of the argument. On the general subject we adhere to the rule pronounced in Vaughn v. Porter, 16 Vt. 266, and re-asserted in Cady v. Owen, by Poland, Ch. J., 34 Vt. 598. But the present case goes beyond those cited, and asks the court, in favor of the party, to repudiate the character and application which he has claimed for the evidence in his argument to the jury, upon which character and application the counsel for the other side, concurring with his opponent, has also argued the case to the jury, and requires the court to put the evidence to the jury in a new character, in a new application, and to lead to entirely different results from that claimed for it in the argument. This certainly is a novelty in practice. It is understood to be the object of an argument, among other things, to apprise the court of the views and reasons of counsel as to the evidence, as it stands related to the legal propositions involved in the case, and to apprise the opposing counsel of the same things and enable them to present their views and reasons to meet those of the other side; and still further, is it an important and leading object of the argument to bring to the consideration of the jury the various elements and features of the evidence as bearing upon the various propositions of fact which the jury are to pass upon, and aid them in arriving at just results from the evidence as to those propositions.

"The course proposed and pursued by the defendant's counsel

in this case, would thwart all these purposes and objects; and not only so, but would directly tend to embarrass the court, mislead opposing counsel, and confuse and confound the jury.

"We, therefore, put our decision of this point solely on the ground that the defendant was not entitled to the exception, without considering whether the view embodied in his unreasonable request was correct or not. We think the court did not err in disregarding the request.

"The point made in the exceptions upon the part of the charge that related to the skill required of a person holding himself out and undertaking to practice as a surgeon, we have no occasion to take time with, as it is not really insisted on and urged in this court. We remark, however, that, taken in its relations to the declaration and the evidence, it would seem to be entirely proper, and as favorable as counsel could claim for their client, unless they would have him take refuge in the character of a quack, from the consequences of his practice as a professed surgeon.

"The most important feature of the case is presented by the exceptions to the omission of the court to charge, 'that if the damage or injury to the plaintiff's arm resulted *in part* from the mismanagement and negligence of those having the care and management of the plaintiff, that the plaintiff could not recover.'

"The court had given a full and satisfactory charge upon every other feature and theory of the defense, and of course had told the jury that if the defendant had exercised the requisite skill, care and attention in dressing and treating, and attending to the fracture, he would not be liable; and, also, that if the damage or injury resulted wholly from the fault of those in charge of the plaintiff, the defendant would not be liable. Upon the case as situated under these points and features of the charge, the request not complied with assumes, and was made upon the assumption, that the jury should find that the damage and injury was caused, in part, by unskillfulness and negligence of the defendant; and upon the assumption that the defendant would be liable, unless the putting of that point to the jury in the terms of the request would shield him. Every other theory and ground of defense was made available to him by the charge given, and he was found liable notwithstanding. The point, therefore, is this, whether, if the failure of the plaintiff to get a sound arm resulted, in any part, from the mismanagement and negligence of those having charge of him, the defendant would not be liable at all in this action.

"This question is to be considered and determined with reference to both the law and the evidence applicable to the point.

"It is to be noticed that upon the evidence, there is no ground of pretense that any mismanagement or negligence had occurred prior to the Friday after the original dressing, at which time the defendant was called in, and examined the condition of the limband of the patient.

"The evidence, and the respective claims of the parties, as to the argument on that Friday about the plaintiff being seen by the defendant on the following Sunday, or Monday, or Tuesday, were submitted to the jury with satisfactory instructions.

.. "Hence, the question really is, whether, upon the evidence, the defendant could be found liable in this action, even though the failure of the plaintiff to get a sound arm resulted, in part, from the mismanagement or negligence of those having charge of the plaintiff. If he could, then he was not entitled to have his request granted; if he could not, then it should have been granted.

"It seems to us quite clear, that, upon the evidence, the defendant might well have been held liable, even though the jury should have found that the damage to the arm resulted in part from the alleged mismanagement or negligence of those having charge of him.

"If the jury should have found, as they might on the evidence, that the improper manner in which the arm was dressed and kept till the Sunday after the accident, had brought it into such condition that the plaintiff must inevitably have a defective arm, the defendant would be liable to an action, even though it should be found that mismanagement or negligence in those having charge of the plaintiff may have aggravated the case, and rendered the ultimate condition of the arm worse than it otherwise would have been. The cause of action would have become perfected before the alleged mismanagement or negligence would have supervened. There is no pretense that the parents or attendants of the plaintiff had anything to do with the dressing of the arm. If the jury had found that that dressing was such, when continued according to the directions of the defendant, that it would produce a defective arm, and had that effect, then the right of action

would have been perfected though the ultimate result might have been aggravated by mismanagement or negligence. In the cases supposed, such supervening mismanagement or negligence would bear only on the measure and amount of damage—not on the right of action.

"If the defendant would have been liable in either of the supposed cases, then of course he was not entitled to have his request granted. In this respect the case would stand by analogy upon the same ground as a common class of cases, particularly for recovery of damages caused by alleged defects in highways. The liability of the town is established, the injury proved, and resulting effects become the subject of inquiry; whereupon the town claims, and endeavors to prove that, owing to mismanagement or negligence in treating the injured party, the consequences have been aggravated. Such showing on the part of the town does not touch the cause and right of action, but only the measure and amount of damages.

"And here it may be well to remark that this just illustrates and makes plain the distinction to be taken between the case before us, upon the precise point made by the exceptions, and all the cases cited by the defendant's counsel as applicable to it.

"In those cases the alleged negligence on the part of the plaintiff was simultaneous and co-operating with the alleged fault of the defendant, an element in the very transaction which constitutes the alleged cause of action. The contributory negligence on the part of the plaintiff, in all the cases, that has been held to preclude his right of recovery, has entered the creation of the cause of action, and not merely supervened upon it, by way of aggravating the damaging results.

"These views leave this case to stand upon common principles by which a person is subjected to liability for the consequences of his wrongful acts and neglect, and as the case is made up it would seem that the defendant has had accorded to him every legitimate ground and means of defense. The exceptions state, as to what the defendant's counsel claim as to the effect of mismanagement, negligence or want of proper care and attention on the part of the plaintiff, and those other than the defendant having the care and management of him, 'the court charged the jury, as to this branch of the case, and its effect on the rights of the parties and upon

the damages, to the satisfaction of the defendant, and so that no exception was taken except the court did not charge that if the damage or injury resulted, in part, from the mismanagement and negligence of those having the care and management of the plaintiff, the plaintiff could not recover.'

"In the view we take of the case we do not find occasion to go into any general discussion of the subject as it is involved in, or related to, the cases that have been cited. This case stands upon simple and familiar principles in no respect in conflict with any of the decided cases, and directly sustained by some, so far as they stand upon concurring analysis. Robinson v. Cone, 22 Vt. 213; Birge v. Gardiner, 19 Conn. 507; Daley v. Norwich R. R. Co., 26 Conn. 91."

The "degrees" of negligence are ably discussed in the case of the Steamboat New World v. Frederick G. King, 16 Howard's (U. S. S. C.) R. 469, where, also, will be found a large number of cases cited, bearing upon the subject. See for same case, Livingston's Law Mag., March, 1855, p. 163.

The following case is from the English Courts, and with the exception of the case of *Slater* v. *Baker* is, I believe, the oldest on record.

Seare v. Prentice, 8 East, 448, April 29, 1807, 47 G. 3.

This was an action on the case brought by the plaintiff, a shoemaker, against the defendant, whom he had employed as a surgeon, for negligently, ignorantly and unskillfully reducing a dislocated elbow and fractured arm of the plaintiff, of which he had undertaken the cure. The case was tried before HEATH, I., at the last assizes at Hertford; and a verdict having been given for the defendant, under the direction of the learned judge, that direction was now impeached and a rule nisi for setting aside the verdict and granting a new trial was moved for by Gurney, upon the ground that there was evidence laid before the jury of the unskillful treatment of the plaintiff by the defendant; but that they were told by the learned judge, that unless negligence were proved, they could not examine into the want of skill; and the evidence he now admitted, did not substantiate the charge of negligence though it proved the want of skill. And he referred to Slater v. Baker, 2 Wilson, 359, to show that an action lay against a surgeon for ignorance and unskillfulness in his profession, and to Bull, N. P. 73, where the general rule is laid down, that in all cases where damages accrue to another by the negligence, ignorance or misbehavior of a person in the duty of his trade or calling, an action on the case will lie; as if a farrier kill my horse by bad medicine, or refuse to shoe, or prick him in the shoeing.

The court granted a rule *misi*. And now upon the judge's report being read, the case appeared to be this:

The plaintiff's brother-in-law proved on his behalf, that on the 2nd of April, 1805, the defendant attended the plaintiff, who had fallen from a horse, and told the defendant that his arm was broken; the defendant said he thought the arm, which was swollen, was not broken, and applied vinegar to it and bound it with tape. That the plaintiff was under the defendant's care for ten weeks without being cured; he then applied to Mr. Kingston, another surgeon, and after sometime could work, and put his arm to his head. On cross-examination the same witness proved that the defendant was first sent for at night and came directly; that he regularly attended the plaintiff every day but one, till the latter applied to Mr. Pidcock, another surgeon, who about nine or ten days after the accident, attended and assisted with the defendant in setting the elbow.

Mr. Kingston, the surgeon, then proved that in July, 1805, the plaintiff was brought to him, a cripple in his arm, one bone of which was broken obliquely below the elbow; that the plaintiff's arm was almost straight; he could not turn his wrist, and had no motion in the elbow; that the witness broke the callus and set it again, and made (what the witness himself described as) a very fine cure, which was spoken of about the country. He imputed the failure of the defendant in his attempt to cure the plaintiff to negligence and carelessness; an apprentice boy, (he said) might have known better; that the bone might have been set within five hours after the accident; though he admitted that the swelling, if much, must first be reduced, which might take a fortnight. And he recommended the plaintiff to bring an action. He also spoke of a conversation with the defendant, who considered it as a very difficult dislocation to reduce; and said he would make a compensation to the plaintiff.

The learned judge told the jury that the gist of the action was

negligence, of which direct evidence might be given; or it might be inferred by the jury, if the defendant had proceeded without any regard to the common ordinary rules of his profession. unskillfulness alone, without negligence, would not maintain the action. And that he was at a loss to state to the jury what degree of skill ought to be required of a village surgeon. But that, whether or not his directions were accurate in this respect, at any rate the witness Kingston imputed only negligence and carelessness to the defendant and Pidcock in not discovering the fracture of the bone of the arm when they reduced the dislocated elbow; which there was no doubt was properly reduced; and that considering all the circumstances of the case, he did not think that such gross negligence was imputable to the defendant as to make him liable in damages to the plaintiff. The report concluded by stating that the jury found a verdict for the defendant, much to the judge's satisfaction; who intimated that the vaunting language of the witness Kingston must have diminished his credit with the jury.

Shepherd, Sergt., and Espinasse, were now to have shown cause; but though all the court seemed to be satisfied, as well now as when the rule was moved for, that the action well lay for unskill-fulness in the profession of a surgeon; yet upon a revision of the evidence as reported, they asked of the plaintiff's counsel what evidence there was of want of skill in the defendant: Kingston the surgeon only imputing to him negligence and carelessness which the learned judge had stated to be a ground of action, and had left to the jury for their consideration; but which the jury had negatived; as indeed the evidence well warranted them in doing.

Gurney, in support of the rule, said that it was to be collected from the whole of Kingston's evidence that he imputed want of skill to the defendant; and that was shown by the expression used by him, that an apprentice boy might have known better. That so much skill at least was required of a surgeon as to be able to tell whether or not an arm was broken or an elbow dislocated. But it was enough that the question of want of skill was wholly withdrawn from the consideration of the jury.

LORD ELLENBOROUGH, C. J. "The surgeon who was examined specifically imputed failure of cure to negligence and carelessness,

whatever other expressions he may have used in the manner of giving his evidence, upon which the learned judge has commented. Therefore, however we may differ from the learned judge, as I -certainly do, in thinking that an ordinary degree of skill is necessary for a surgeon who undertakes to perform surgical operations, which is proved by the case of Wilson, and indeed all analogous authorities, in the same manner as it is necessary for every other man to have it in the course of his employment; as a farrier who undertakes to cure my horse must have common skill at least in his business, and that is implied in his undertaking; and although I am ready to admit that a surgeon would be liable for crassa ignorantia, and would be justly responsible in damages for having rashly adventured upon the exercise of a profession without the ordinary qualification of skill, to the injury of a patient; yet the question did not arise upon the evidence in this case; for no want of skill was imputed to the defendant, and therefore the opinion of the learned judge upon that point does not affect the merits of the verdict upon the evidence in the cause."

The other judge concurred, and Grose, J., referred to 3 Black.

Com. (ch. 9, pp. 163-4,) as confirming the general doctrine.*

(To be continued.)

ARTICLE II.—LECTURE 4—Neuralgia. By WALTER HAV, M.D., Assistant to Chair of Practical Medicine, and Lecturer on Diseases of Brain and Nervous System, Rush Med. College.

(Continued.)

Gentlemen: In my last lecture I commenced the subject of the treatment of neuralgia, which you will remember I divided into prophylactic, palliative and remedial. This classification is of course purely arbitrary, and is original with myself, and adopted as simple, and practically convenient. You will find in the course of your reading, that every author has his own ideas of classification in accordance with the leading principle which governs him in his study and management of disease. Mine has been arranged

^{*} Vide Esp. Dig. 601, or vol. 2, p. 222, of New York edition, Lipscombe v. Holmes, 2 Campb. 441, and reporter's note thereto, pp. 442-3.

with reference to my mode of studying these diseases, and your will doubtless, in after years, make classifications for yourselves, such as observation, experience, and the natural bent of your own genius will suggest.

As I have already mentioned to you the most prominent and valuable prophylactic and palliative agents, and some of the more general curative or remedial, I will now suggest to you some of those which have been called specific or anti-toxic, and designed to counteract some special condition of the system, constituting the exciting cause of the pain. These special conditions are, more conspicuously: the malarial, rheumatic, gouty, and syphilitic.

There are three remedies which exercise a marked influence upon the malarial poison; these are, strychnia, arsenic and quinine.

The first I have found capable of producing most valuable effects, although it would be impossible to say whether these were due to its powerful stimulant action upon nerve-tissue as a general nerve-tonic, or to any anti-malarial, or anti-toxic properties it might possess. I am inclined to believe that the former is the true reason of its beneficial effect. The only way to test this question thoroughly, would be to administer it in malarial neuralgia, in neuralgia not of malarial origin, and in some other morbid condition of the system dependent upon malarial influence, and not neuralgic in its character; and comparing the results. In the first two cases, its value cannot be disputed; in the third, it is not yet established. I know of no remedy, however, which has been in my own hands so generally useful in the treatment of neuralgia as strychnia, in doses ranging from 10 up to 15 grain. Below the first dose, the effect is not very decided; above the second, it is unsafe.

Arsenic has been already referred to as a valuable general nervous-tonic; its anti-malarial properties are well established likewise; it seems, therefore, to be doubly appropriate as a remedy in malarial neuralgia. In cardiac neuralgia it is especially valuable, and may be continued, as I have already told you, for many weeks, or even months.

Of all remedies applicable to the cure of malarial neuralgia, you will recognize quinine as the type. The relation of this drug to innervation is peculiar, and I believe its power over ague (intermittent fever) to be due, not to any antiseptic properties it

may possess, according to some authors, nor to its power of destroying organic spores in the blood, which may or may not occasion the disease; but to its direct effect as a nerve-tonic, by which it sustains the equilibrium of functional energy, and prevents the periodical disturbances which constitute the essential factor in this form of disease. I can find no explanation of the effect of this drug; authors, as a general rule, being silent about the modus operandi of medicines. My own belief is, that it improves the nutrition of nerve-tissue in anæmic conditions by overcoming arterial spasm, by paralyzing the vaso-motor nerves, and thus admitting a more liberal blood-supply.

The remedy may be administered alone, or combined with iron, or with iron and strychnia.

One grain of strychnia, forty of the sulphate of quinia, dissolved in an ounce of muriated tincture of iron, and administered in doses of twenty to thirty drops, three or four times daily, will suffice for any ordinary case of this form of disease.

Authors speak of this form of disease as being very rare. It is so, doubtless, in the large cities in high latitudes, in which most of them have acquired their experience; but in lower latitudes and warmer climates it is of very frequent occurrence as a sequel or complication of malarial fevers.

Colchicum has been used freely in the treatment of neuralgia, and, where the disease seems to have its origin in the dyscrasia of gout or rheumatism, is valuable. This complication is, I think, more infrequent than is generally believed. Many cases of what was formerly called rheumatism, are now, under more accurate methods of diagnosis, clearly identified as neuralgic.

We come now to that much-abused remedy, "mercury." From what I have already said of the universality of debility as an essential element in neuralgia, it would seem that mercury, the type of analeptic, of tissue-destroyers, could find no place whatever among its therapeutic category, without trenching upon the domain of the little-pill gentry, under their motto "similia similibus." Nevertheless, in certain forms of the disease which have the syphilitic diathesis as their exciting cause, this agent is invaluable, and as these cases are by no means rare, the remedy is often called into play. For you must remember that in the human economy, as in all other organisms, repair, reconstruction, neces-

sarily implies waste, destruction; new tissue cannot grow, new cells cannot germinate, until the old are destroyed and removed to make room for them.

Of the preparations of mercury, the chlorides, iodides, and bromides, are the most useful. The bichlorid, from its greater solubility, and consequent susceptibility of administration in very small doses, i. e., from $\frac{1}{40}$ of a grain up to $\frac{1}{10}$, is better adapted to this class of cases than calomel. The same rule should apply to the double salts, with iodine and bromine. But they have been found to be so irritating to the stomach that they have not come into general use. The proto-iodid and proto-bromid seem best adapted to the syphilitic diathesis, when it becomes an efficient cause of neuralgia. I believe that I was the first to use the protobromid, at any rate in this part of the world. When I first began to experiment with it, it was a rare chemical, prepared only by Merk, of Darmstadt. The worst case of sciatica I ever saw, which had baffled the skill of some of the best physicians in the United States, during seven years, after having resisted the influence of every remedy, regular and irregular, (they were all defective,) yielded at last to this. The patient was a man 60 years of age, of almost gigantic size, who had been, during the four preceding years, attacked about the first of January of each year, and about six or seven o'clock in the evening of each day, with sciatic neuralgia, of the most intense severity. I have known him to stand during the whole of fourteen successive nights, holding on to the bedpost screaming with pain; during the day he would attend to his business (he was a merchant) just as usual. I have kept him under the influence of chloroform many entire nights, without any permanent relief. Discovering accidentally, after three years of experimenting, a copper-colored scar with irregular margins, a little above the external malleolus, I learned from the patient that it was the scar of an old ulcer that had troubled him for many years, resisting all sorts of treatment, until it had healed spontaneously, as he said, after his recovery from an attack of cholera, during which he had taken large doses of calomel. Acting upon this hint, I gave him bromid of mercury in ‡ grain doses; and the sciatica disappeared, and did not reappear during the remaining ten years of his life, which was terminated by phthisis at 70 years. The neuralgia in this case was doubtless due to thickening of the periosteum in the posterior portion of the sciatic foramen; the case had previously been benefited temporarily by blisters.

The next remedy to which I shall call your attention is iodide of potassium. This seems peculiarly adapted to neuralgias of syphilitic origin, and should be given pretty freely, in doses of ten grains or more, every four or six hours.

I have recently treated, successfully, a case of trigeminal neuralgia of twenty years standing, resulting from an injury to the head consequent upon a railroad accident, with ten grain doses of iodide of potassium, after every other treatment had been abandoned as useless.

There was probably in this case either a thickening of the internal periosteum of the skull, or an hypertrophy of the connective tissue of the nerves themselves.

Cannabis or Indian hemp, or as sometimes called, haschish, is one of the most useful of the narcotics in the treatment of this disease. Much disappointment is experienced in its use, in consequence of the variable strength of the preparations usually found in the shops. When the extract, in which form it is most conveniently used, is made from the leaves of the plant grown in a tropical climate, it may be depended upon when administered in one grain doses every six or eight hours, to allay pain and produce sleep. When prepared from plants of the cannabis indica, grown in this country or in Europe, it has no value whatever.

A class of remedies has recently come into general use, of which bromine is the active principle. In combination with potassium and sodium, calcium, lithium, mercury and iron, in the forms of bromides of those substances respectively, these agents seem to possess peculiar value in the treatment of neuralgia, into which congestion, hyperæmia of the nerve-centres, enters as a factor; and these are many. Hyperæmia is not by any means inconsistent with the idea of debility, indeed it is a very frequent accompaniment, being itself a local expression of vaso-motor debility exhaustion. Indeed, within my own experience, they constitute the best prophylactics against this form of neuralgia. In trigeminal neuralgia, sick headache, I believe the bromide of sodium to be the most valuable agent that has thus far come under my own observation. I prefer it to the bromid of potass. for two

reasons, which have nothing whatever to do with its therapeutic effects. The first of these, is its less disgreeable taste. The second, that it does not, like the bromid of potass., produce a troublesome cutaneous eruption.

The next remedy which I shall mention to you as useful in the treatment of neuralgia, is the actual cautery. The remedy is old; has been abandoned and revived. The cauterizing iron should be applied at a white heat, in order that an eschar may be formed without suppuration. I can speak very superficially of the use of this remedy; it is one which promises much, from the profound alteration which it must induce in the nutrition of the tissues in the neighborhood of the point of application. You will find it difficult to induce patients in private practice to submit to this remedy, although it is not so painful perhaps as many now in use. It is applied now by means of a galvanic battery. Bunsen's is the best, and is thus termed the galvano-cautery.

Moxas have been applied to cure neuralgia, more especially in the form of sciatica. I think "the game is hardly worth the candle," as it would be difficult to say which was the lesser of the two evils, or whether the remedy was not worse than the disease.

Electricity, as a remedy for neuralgia, presents much that is attractive to the theorist, while at the same time its practical value is endorsed by some of the highest authorities: As for example: Messrs. Althaus and Anstie, in England; Duchenne and DuBois Raymond, in France; and Remak and Moritz Meyer, in Germany.

Attempts have been made to prove the identity of electricity and nerve-force; these attempts have thus far proved failures. They may be identical, but it has not yet been demonstrated. Should it be identical with nerve-force, then in it we must have the theoretical remedy for every perturbation of innervation; it would be a nervous panacea, and such you would believe it to be already, if you swallowed without any grains of allowance all that its enthusiastic advocates claim for it. But I must warn you, that valuable as it is, the application of electricity is purely empirical. Why it should benefit in some cases, and injure in others, is not satisfactorily explained as yet.

Systematic writers all tell us that the interrupted current will produce this or that effect, and the constant current this or that other effect, but fail to tell us how these effects are produced, and why; and, moreover, are sadly at variance as to their statements of facts.

The whole subject of electrical therapeutics presents a wide field for examination and experiment.

With regard to its application in neuralgia, the preponderance of evidence seems to give the preference to the continuous current over the interrupted, and this agrees with my own observations and experiments, which have not, however, been very numerous. With the interrupted, or, as it is sometimes called, the Faradaic, current, I have effected little.

The continuous or constant current, or primary current, as it is called, has produced astonishing results in the hands of Meyer and Remak. It should be applied only a few minutes at a time, daily, and repeated for many days. Sometimes, however, the disease is arrested after two or three applications; sometimes not until after fifty or sixty.

With regard to the direction of the current, it seems to be of little consequence, so long as the current passes through the diseased nerve or centre, according to some authors. Upon this subject there is much difference of opinion expressed by systematic writers on electro-therapeutics, some specifying that a direct, others that an inverse current should be used.

DuBois Raymond gave the name electrotonus to the condition of a nerve within the circuit of a constant battery. He found, what one would infer reasonably, that the original, or what he calls the inherent nerve-current, was increased in power when the artificial current was in the same direction, and diminished when it passed through the nerve in an opposite direction. When the nerve current is increased, it is said to be in the positive phase; when it is decreased, it is said to be in the negative phase. The increase takes place when the positive electrode (or anode) is nearest the transverse section, (the experiments were made on segments of nerves); the decrease when the negative electrode (or cathode) is nearest.

Brenner, a German electrician, says, that it is rarely possible to conduct the galvanic current in the direction of a certain nerve-current, because the poles are almost always placed on points not having equal physiological importance, and hence the relative positions of the poles are to be considered as indicators of the physio-

logical effects of the current. His method, which is confirmed by Pfluger, and which seems to be the most in harmony with what we know of the relations of electricity to nerve-force, is, to give that pole whose action is most appropriate to the case, the position most favorable, in regard to conduction, for its working on the nerve.

Mr. Althaus, the highest English authority upon electro-therapeutics, says, that, whether the application be central or peripheral, the positive pole alone should be applied to the part which we wish to affect. Eulenburg, a distinguished Germanelectrician, agrees with him; and further states that the negativepole placed in this position will do damage.

Mr. Anstie and Reynolds declare, that while theoretically direct and inverse currents should have different effects, practically they

do not, either in the case of spasm or pain.

Dr. Buzzard reported a case of cervico-brachial neuralgia, in which the same effect was produced by placing the positive pole upon the nape of the neck, and the negative in the hand, or viceversa.

These differences of opinion amongst the very highest authorities, will demonstrate to you the truth of what I said at the beginning of my remarks upon this subject, i. e., that the application of electricity as a therapeutic agent in the treatment of nervous diseases is yet empirical. To establish laws for its rational and intelligent application more experiments and more facts are demanded.

It is necessary that these experiments should be made, and these facts be collated by you, gentlemen, and that the use of this valuable and powerful agent should not be abandoned to charlatans.

The first electrical machines used in therapeutics, were those of nature's manufacture. It is stated that one thousand years ago the natives of South Africa placed their sick children in a hole filled with water, in which were placed torpedos, one of the cartilaginous fishes, having a portable battery always ready for use. A similar treatment for gout was used by Scribonius Largus, a physician who lived in the time of Tiberius Cæsar. Pliny and Dioscorides both refer to it. The modern application of this method dates back about one hundred years, since the report to the Societe Royale de Medecine (Paris), by Mauduyt, in 1773.

ARTICLE III.—A Fatal Case of Placenta Prævia. By G. C. PAOLI, M.D., Chicago.

On New Year's day, at 4 o'clock P. M., I was requested to call to see a case of midwifery, complicated with hemorrhage of the uterus.

On my arrival I found Mrs. C., twenty-five years of age, previously the mother of two children, under strong labor pains; she was nearly pulseless, with cold extremities, cadaverous countenance, and in a state of extreme exhaustion. She was tossing about in the bed in her efforts to breathe.

On vaginal examination, I found the uterus well dilated, but very hard to the touch; and besides, a fleshy fibrous mass, which indicated a placental presentation. Previous to my arrival, the liquor amnii had escaped. I gave my patient at once a stimulant, consisting of spiritus terebinthina, and ordered the room to be warmed up, as it was rather cool when I entered.

I placed the patient on the edge of the bed, so that I could easily introduce my hand in the vagina for the purpose of separating the placenta, which was firmly attached to the uterus. After some careful manipulations, I succeeded in breaking up the adhesion, and discovered a breech presentation in grasping one of the feet. I extracted a male child, apparently eight months old, who, no doubt, had been dead a couple of days. There was scarcely any loss of blood during the operation. I placed her at once in a horizontal position, and with blankets dipped in warm water around her body, but I could not by any means get up any reaction.

The woman died about half an hour after delivery, in a state of syncopation.

Remarks on the Case.—The woman had been bleeding, more or less, for two months. Dr. C., who was called to see her, before Christmas, stated to her husband that it was not dangerous, and that he had often observed such cases in the course of his praxis. But as both the woman and her husband became alarmed by the occasional gushing of blood, they sent for Dr. B., who, after examining her, stated that it would not be professional for him to undertake the case, as he would be liable therefor to be expelled from any medical society.

ARTICLE IV.—Retained Menses from Imperforate Hymen. By A. FORD, M.D., Bowne, Kent County, Michigan.

About six months ago I was called to see Miss H., aged 14 years. Found her suffering severely with pain in the back and through the lower part of the abdomen; complained of a lump in the region of the navel. On examination, found a hard, movable tumor reaching as high as the umbilicus. Patient quite weak, hardly able to stand. Questioned the mother in reference to the appearance of the menses, who said that she thought it time for the menses to appear; that for about two years the girl had had regular periods of being unwell, but no discharge had taken place. I diagnosed retained menses with imperforate hymen, or closure of the mouth of the uterus; and obtained permission to make a digital examination. Found the hymen tense as a drumhead, and bulging through the vulva. I made an incision with a curved bistourie, and the retained menstrual fluid gushed out. It was dark colored, thick, and almost ropy; there was a large quantity, but do not know how much. When the discharge ceased, she said, "Mother, the pain is all gone!" She has been regular ever since, and is as fresh and healthy a girl as you would wish to see.

Translation.

ARTICLE V.—Researches upon some Questions Relative to Septicamia.

By H. M. DAVAINE, of Paris. Translated from the French by Prof. J. W. FREER, M.D., Chicago.

"The confusion that has been made between maladies caused by 'charbon,' or malignant pustule, and those determined by the introduction into the animal economy of putrid matters, has existed until the last few years. The study of charbon has caused me to search for characters of differentiation among affections caused by putrefaction, and consequently to the investigation of septicæmia. "Wishing to place myself under the simplest conditions, I obtained healthy beef's blood from the slaughter-house, and guarded it until it was putrefied, when I inoculated it in divers animals, but as I will show in one of the communications that I hope to have the honor of making to the Academy upon this subject, the conditions of putrefied blood are more complex than one would have anticipated, and it was only after repeated researches, that I was able to obtain, upon certain points, results that were free from doubt.

"On the 1st of February, 1869, I communicated to the Academy of Sciences some of these results, nevertheless I announced that my labors on this subject were still incomplete.

"One of the points in my communication related to the contagiousness of septicæmia; I then recalled the experiments of M. Raimbert, who reported in 1859, the transmission in many animals successively, of a malady determined by putrefied matter that had been inoculated in the first of the series, nevertheless, believing that the result was of the nature of charbon, our learned confrere did not sufficiently recognize the importance of his observations.

"M. M. Coze and Feltz, have discovered another important fact, 'which is, that in creating several generations of infected blood, by inoculation, the last of the series are toxicologically more active than the first, or even the putrid matter itself, that is, it requires more time to kill an animal with putrid matter, than by inoculation with blood of an infected animal. This experimental fact is of the greatest importance; it makes us comprehend how an epidemic is aggravated by successive transmissions."

"I should say, in order to render homage to truth, and to one of our most illustrious masters, that Magendie recognized the contagious transmission of septicæmia; he has even stated that the virulence of the blood of an inoculated animal is greater than the original putrid matter.

"It has appeared to me that if blood, putrefied in open air, is more or less active than that of an animal killed by inoculation of this fluid, one should be able to produce precise phenomenadeath for example—with different doses of these two fluids."

The following is the method pursued by M. Davaine in his experiments:

"I inject with a Pravaz syringe in the subcutaneous tissue, a

determined quantity of the liquid. When it concerns fractions of drops, I mix a drop of septic blood with ten, twenty, or a hundred of water, and inject a single drop of the mixture. Quantities more infinitesimal are obtained by successive dilutions.

"Let us see at first what is the quantity of putrefied blood required to kill an animal. In order to resolve this question, it will suffice to give the abstract of the inoculations which I have practiced for divers researches during many years, nevertheless, I will only speak of those performed upon rabbits and cobayas.

"Of seventy-two cobayas, injected with one to ten drops of putrefied blood, forty-three survived, and twenty-five died. Of eleven other cobayas that received a fraction of a drop, none died with a dose of less than one-fourth of a drop.

"Of forty-eight rabbits, inoculated in the same manner with one to six drops, twenty-two survived, and twenty-six died. Of nine others injected with fractions of a drop, none died with a dose less than two-thousandths of a drop.

"From the above we may conclude that the introduction of one or more drops of putrefied blood into the circulation of the aforesaid animals, is not mortal in half of the cases.

"Concerning fractional drops, the cobaya succumbs rarely to less than one-tenth and the rabbit to less than one-hundredth. The extreme seems to be one-fortieth for the first, and one-two thousandth for the second.

"Observe now the second question we have to resolve, viz.: What dose of septicæmic blood—that is to say, blood taken from an animal that has died from inoculation with putrefied blood—is required to produce death in another animal of the same species?

"It would take too long to quote all of my experiences upon this subject; I will limit myself by passing in review a series of twenty-five successive inoculations, or twenty-five generations, which will give a sufficiently precise response.

"The blood of a beef taken ten days after slaughter, in July, and very much putrefied, was injected in the subcutaneous tissue of the necks of five rabbits, in doses of two, four, ten, twelve and fifteen drops. All died; the first in five days, the second in nine days, the third in forty hours, the fourth in twenty-six days, and the fifth in fifty-five days, after inoculation.

"I will have to speak, further on, of the prolonged duration of

life of four of the animals, and the irregularity of this duration relatively to the quantity of liquid received.

"The blood from the heart of the rabbit that died forty hours after injection with ten drops, was injected twelve hours after in the cellular tissue of four other rabbits. The four having received successively, one, two, three and four drops, died the same night—thirty to forty hours after inoculation.

"In order not to abuse the time accorded me by the Academy, I pass to the fifth generation of inoculations: the blood from the heart of a rabbit of the fourth generation, was injected, two hours and a half after death, in three others, in doses of one, one-tenth, and one-hundredth of a drop. Two died in fourteen hours, and the third in twenty hours.

"I pass to the tenth generation: Three rabbits were inoculated with blood of the ninth generation, dead since one hour. One received one drop, another one-ten thousandth, and the third one-twenty thousandth. The first died the following night, the second fifteen hours, and the third thirty-five hours after injection.

"From the fifteenth generation, three rabbits were inoculated with one-twenty thousandth, one-thirty thousandth and one-forty thousandth of a drop. All died in intervals of from twenty to forty hours.

"The blood from a rabbit of the twentieth generation, one hour after death, was injected in doses of $\frac{500}{1000}$, $\frac{100000}{100000}$ and $\frac{100}{100000}$ of a drop; of the three that had received these minimum quantities of blood, the first and third_died in thirty-five hours, the second in twenty-one hours.

"In the generations following, I arrived at quantities, the minuteness of which exceeded all prevision.

"From the twenty-second generation, three rabbits were inoculated with $\frac{1}{100000}$, $\frac{1}{1000000000}$ and $\frac{1}{10000000000}$ of a drop and another with $\frac{1}{10000000000}$ of a drop of the blood of a rabbit dead since two hours, having been inoculated itself with $\frac{1}{10000000}$ of a drop of septicæmic blood. The three died at intervals of from thirty-six to forty hours.

"From the twenty-fourth generation, five rabbits were inocu-

lated with the blood of one that had died from the effects of

animals died in less than twenty-four hours.

"Finally: from the twenty-fifth generation, four rabbits received 100000000000, 100000000000 and 10000000000000 of a drop from a rabbit of the above-mentioned series that had died with 100000000000 of a drop; but only one of these animals died. which was the one that had received 100000000000 of a drop of blood.

"It seems then that the limit of transmissibility of septicæmia with the rabbit may be 10000000000 of a drop of septic blood.

"In order to achieve the elucidation of the subject that I have proposed to resolve, it remains to recall the results of inoculation with blood putrefied in open air, and those inoculated with blood from animals that had died with septicæmia. We know, on the one hand, that more than one-half survived the effects of putrefied blood, while on the other, all died from infinitesimal doses of septicæmic blood. Septicæmic virus, therefore, acquires a much greater activity in passing through the blood of a living animal.

"There is another difference between blood that is putrid, or that which is septicæmic, which merits consideration, a difference already signalized by M. M. Coze and Feltz; which is the relative

rapidity of death in the two cases.

"I limit myself by simply recalling the results of inoculation with the putrefied blood, which has been the source of the series of which I have made the exposition, viz.: of the five rabbits inoculated with putrefied blood, the duration of life has been from thirty to forty hours with two, and six, nine and twenty-six days with the others; while sixty-nine rabbits inoculated from the generations that followed, with the exception of two, all succumbed in less than forty hours.

"A fact worthy of notice is the irregularity of the duration of life after inoculation. The incubation or duration of the malady is not in relation with the dose administered, as we have seen with the five rabbits inoculated with the putrefied blood, of which the

"With the maladies attending 'malignant pustule,' on the contrary, one remarks a great regularity. The duration of life after injection with the infectious blood is proportional to the dose inoculated.

"We know that the virus from charbon destroys itself by putrefaction; now in place of inoculating with fractions of a drop of fresh blood, if one takes that which is putrefied, by conservation more or less protracted, the length of life is prolonged in ratio to the length of time that the virus has been subjected to putrefying influences.

"The facts that I come to notice, may throw some light upon a question incompletely understood, or controverted, relative to the pernicious effects of putrefied animal substances.

"Although at the present time we may generally be in accord upon this subject, yet not long since, the dangers arising from these emanations were denied by excellent observers; such as Parent, Duchatelet, etc. On the other hand, people in the country attribute grave maladies, such as charbon, to infection from flies that have come from putrefying cadavers. Physicians recognize the redoubtable accidents, determined by dissecting wounds, and we know that cadavers of puerperal women are particularly infectious, nevertheless, it is often impossible to explain the variability in the gravity of the accidents, which has been usually placed to the account of individual predisposition.

"Doctor Calles has remarked that fresh cadavers are more dangerous than those which have arrived at a certain stage of putrefaction. This observation appears strange, but will find its explication in the facts that I now report.

"We have already learned that blood putrefied in the open air is rarely fatal in doses of less than one drop, and sometimes it requires ten or fifteen to cause death, whilst the action of blood from an animal that has succumbed from inoculation is infectious in infinitesimal quantities; this without doubt is the cause of the virulence or non-virulence of certain cadavers.

"I will explain by an example: Two horses are wounded on the field of battle; one dies in a few hours, the other survives for a longer period; but the flesh is lacerated, blood is extravasated under the skin, in the connective tissue and elsewhere. The weather is warm and moist; in less than twenty-four hours the blood putrefies and the horse dies septicæmic soon after.

"Thus, the cadaver of the second horse, and upon the same field with the first, and whose death seemed to be due to the same original cause, is extremely infectious, while that of the first is hardly inoculable. Inoculation with the liquid from one or the other will result very differently, and if the flies that make their repast upon the blood of these two animals, alight upon the wounds of other animals, their contact remains inoffensive in one case, and in the other produces the gravest accidents.

"In order to confirm these views I made the following experiments: A meat fly being placed under a bell-glass, I introduced beneath a little blood from a rabbit that had died the evening before from septicæmia, caused by inoculation with \(\frac{1}{10000000} \) of a drop of septicæmic blood. One-half hour after, I separated the sucker of this fly with scissors, and introduced it through a very narrow puncture, under the skin, behind the ear of a vigorous rabbit. It died thirty-five hours after.

"A natural question to present, is that of the duration, longer or shorter, of the virulence of septicæmia, in a certain number of generations. Does the virus diminish in power? Does it exhaust itself at last? Or, on the contrary, does it augment in activity by successive transmissions?

"The solution of these questions is not without interest in point of view of the origin, or of the intensity of epidemic and contagious diseases; for although each of these maladies may have its own proper nature or species, the knowledge of particular facts may have at least the advantage of rectifying misconceptions.

"The question of the increase of virulence by successive generations is proved by the following experiments:

"First. Beef's blood preserved ten days, was inoculated in five rabbits in doses of $\frac{1}{10}$, $\frac{1}{60}$, $\frac{1}{100}$, $\frac{1}{600}$, and $\frac{1}{1000}$ of a drop. The last two were not sick, at least not in appearance; the first three

died. The limit of septicite of putrefied blood, capable of destroying life, is therefore inferior to five-hundredths of a drop.

"Second generation. The blood from the heart of the rabbit that had died from the effects of one-tenth of a drop was inoculated in five rabbits, in doses of $\frac{1}{1000}$, $\frac{1}{1000}$, $\frac{2}{1000}$, $\frac{3}{1000}$, $\frac{3}{1000}$, $\frac{4}{1000}$ and $\frac{5}{1000}$ of a drop. All died, in intervals of from thirty to sixty hours.

"Second experiment—First generation. Beef's blood preserved five days, was inoculated in five rabbits, in doses of one drop, $\frac{1}{100}$, $\frac{1}{1000}$, $\frac{1}{1000}$, $\frac{1}{1000}$, and $\frac{1}{10000}$ of a drop. Only the first three died. The power of the virus to kill in these cases was below two-thousandths of a drop.

"Second generation. The blood of the heart of one rabbit that had died of one-hundredth of a drop was inoculated in three rabbits, in doses of $\frac{1000}{1000}$, $\frac{1}{1000}$, $\frac{1}{0000}$ and $\frac{10000}{10000}$ of a drop. All died, in intervals of sixteen to twenty-three hours.

"I will not undertake to search if the virus which acquires so great an activity in the economy of an animal is of another nature than that of the virus of the putrefied substance that had killed this animal. I can say that it is not the putrefaction of the cadaver that has impressed a new activity to the poison found in its veins; for, in my experiments, often the inoculation has been practiced immediately after death, the body being still warm.

"But I will say more: The septicæmic virus very probably is destroyed by the putrefaction which seizes the animal that it has killed. Here are two experiments that respond to this question:

"First experiment. The blood of a rabbit that had died of septicæmia the 28th of July, (the virulence of which had been established by inoculating rabbits,) was preserved in a flask twenty-three days. The 20th of August it was inoculated in three cobayas, in doses of one-eighth, one-fortieth and one-hundredth of a drop. The result was altogether nul.

 twenty days. The 8th of September, a rabbit was inoculated with the blood in a dose of $\frac{9}{1000}$ of a drop. This rabbit was not even indisposed.

"These facts, if sustained by further experiments and observations, possess more than ordinary interest; they explain also the observations of Dr. Calles, relative to the minimum virulence of cadavers in advanced putrefaction."

Selections.

Some Contributions to the Stastistics of the Operation of Nephrotomy, so-called, with a few Observations thereon. By Thos. H. Kearney, M.D., Professor of the Principles of Surgery and Surgical Pathology in the Miami Medical College.

There are certain diseases and operations, which, in consequence of their infrequency, appear to fade out of the professional memory, at times. Such is the operation of nephrotomy, which, though advocated in the Hippocratic writings, and commented on by many of the ancient writers subsequent to the time of Hippocrates, is at the present day hardly mentioned by surgical authors. Mr. Erichsen (in the 5th edition of his work), Sir Wm. Fergusson, Professor Hamilton, and Mr. Gant, do not mention it at all. Dr. Ashurst is very brief on the subject, and does not give any statistical information beyond a bare reference to the case of Marchetti. Professor Gross, in the edition of his work just issued, devotes eleven lines to the subject, and cites three cases of the operation, so-called: that of Marchetti, and those of Gunn, of Chicago, and Durham, of Guy's Hospital. These last two, it will be seen by reference to the published accounts in the journals, were merely exploratory operations, by which the kidney was exposed, so as to admit of being examined for calculus, according to the suggestion of Mr. Thos. Smith. Professor Gross might have correctly mentioned the case of Mr. Bryant, of Guy's, in which the kidney was incised, but without the discovery of the suspected stone. That complete nephrotomy was performed in this case was proved at the post-mortem examination of the organ.

During a recent discussion in the Academy of Medicine, the question of the infrequency of such operations as the one then reported, came up; and, in consequence, the writer was induced to make some researches on the subject. The following extracts

are given verbatim, or as nearly in literal accordance with the

original as possible.

Chelius uses the following language: "The removal of the stone by cutting (nephrotomia) can only be undertaken, when an ædematous, or fluctuating swelling, or a fistula, has formed in the loins. Having opened the abscess, its bottom must be examined with the finger or the probe, and if a stone be met with, it must be removed, after enlarging the wound, if it be too confined.—Syst. Surgery,

Am. ed., vol. 3, p. 268.

After describing pyelitis from calculus and other causes, Sir Henry Thompson adds: "Abscesses may be formed under these circumstances; also as the sequel of nephritis; they should not be opened until the tumor points and the diagnosis is perfectly clear. Often they are perinephritic, although originated by disease within the kidney itself; occasionally a calculus may be removed through the opening made."—Holmes' Syst. Surgery, vol. 4, p. 333,

1st ed.

Velpeau, after expressing his incredulity in regard to the operation of true nephrotomy having ever been attempted, goes on to say: "The operation cannot, in reality, be proposed, except in a small number of cases, as in those in which the flank, which has become the seat of an evident fluctuation, after the existence of various signs of calculous affections in the kidney, would enable us to reach the morbid collection with facility and certainty," etc., etc. "In such cases the operation is so simple, and is reduced to so small a matter, and has moreover, to be modified by so many controlling circumstances, that it would be useless to describe it in

detail."-Mott's Velpeau, Blackman's ed., vol. 3, p. 692.

After making some admirable remarks in reference to the ambiguity of symptoms, and the difficulties and dangers of the operation, Mr. Benjamin Bell condemns the performance of true nephrotomy; but adds: "When, indeed, the inflammation induced by a stone in the kidney terminates in an abscess, and when the matter thus collected forms a tumor, in which a fluctuation is distinguished, little or no danger can ensue from laying it open: and in such an event, the stone that produced the tumor will either be discharged along with the matter, or it may, if it can be laid hold of, be afterward taken out with safety."—Syst. Surg., vol. 6, p. 216, 7th ed.

6, p. 216, 7th ed.

"The incision, in parallelism with the sacro-lumbalis muscle, must be free, and sufficiently deep to enable the surgeon to explore with his finger the extent of the cavity, and seek for gravel, or any large concretion."—Cyclop. Pract. Surg., art. Ne-

phrotomy.

Samuel Cooper, in his dictionary of Practical Surgery, uses these words, under the head of Nephrotomy: "When a stone, from its size, cannot pass from the kidney, and excites inflammation and suppuration, no doubt the surgeon may make an incision into the tumor, and extract the calculus. In this sense, nephrotomy is certainly a practicable operation. Warner contends that it can only be practiced in such circumstances, notwithstanding whatever may have been said by Marchetti, or others, upon the subject. In such a case, the operation would not be attended with any greater difficulty than the opening of an abscess in any other part of the body."

This last sentence is almost a verbatim quotation from Joseph

Warner's Cases in Surgery, p. 241.

It is evident from the foregoing extracts, that the authors quoted do not regard such an operation as the opening of a lumbar abscess, in connection with a disorganized kidney, and the extraction of a renal calculus, an operation of any magnitude; and it may be inferred from the language used, that such cases are not exceedingly rare. For none of them comment on their infrequency, but speak of the removal of a calculus under such circumstances as a matter of course. Yet, an examination of the literature of the subject, as far as rather limited opportunities would permit, affords only the following cases—sufficient, however, to dispose of the claim made for such a case recently, that it was the second of its kind reported!

Cases.—A case is referred to by Heister, though without the particulars. After arguing in favor of the practicability and propriety of true nephrotomy in certain cases, he proceeds in the

following quaint language:

"But nothing can be more reasonable than to perform Nephrotomy, when we are directed to it by Nature pointing out the place, by a Tumour and Abscess formed in the loins, from a Calculus in the Pelvis or Kidney. In such a Case, we are also supported by the Advice and Authority of Schenckius, Wedelius, and Meekren; together with Lavaterus, formerly an eminent Physician and Surgeon of Helvetia, with whom I amicably cohabited for some time, in the Year 1710, he then practicing Surgery at London with great Applause. He at that time told me that he had not only performed this Operation with Success in the above-mentioned Case, but had also publickly declared (in the last Page but one of a Treatise published in the Year 1708, at Utrecht on the Rhine, de Atriteis et Hyposspadiceis), 'I perform the Operation of Nephrotomy, on either of the Kidneys, when Nature directs to that Practice by forming an Abscess.'"—A General System of Surgery, by Lawrence Heister, vol. 2, p. 163.

"Gaspard Bauhin operated on a girl, born of parents of calculous diathesis, who was attacked with a tumor in the lumbar region, following a total suppression of urine. A surgeon applied poultices to this tumor, during two months, in the hopes that it would suppurate, but without any success. At last he distin-

guished a very hard point in the tumor, into which he made an incision through which he extracted two calculi. This operation was followed by all possible success."—Rayer, Maladies des Reins, vol. 3, p. 59.

"Rousset also reports that a man who had suffered for a long time with nephritic pains, accompanied by vomiting, presented afterwards a considerable tumor between the groin and iliac bone. A very experienced surgeon made an opening into the tumor and evacuated a quantity of urine mixed with pus, and a calculus of the size of a bean.—*Ibid.*, vol. 3, p. 222.

"Aymar, a surgeon of Grenoble, communicated to Riviere the case of a man who had a tumor in the lumbar region, from which he removed calculi as large as almonds, and later one the size of a bean. During ten years, consecutively, there ran out of this fistula a serous fluid, which would soak the linens applied to it, so that it seemed as if they had been dipped in water. The fistula closed from time to time, only to open again spontaneously after the lapse of some months."—Ibid., vol. 3, p. 325.

"Roonhuysen extracted, by opening an abscess in the right kidney, a tolerably large stone, of which he gives a drawing in his work. He conducted the treatment of the wound, according to the rules of the art, to a perfect cure, so that the patient lived in perfect health for two years after. At the end of this time, a new inflammation occurred on the same side of the loins. The surgeon, not doubting but that there was still some foreign body there, opened the cicatrix and removed a second stone, smaller than the first. The wound closed, and the patient since has always enjoyed good health."—Ibid., vol. 3, p. 226.

"Ledran reports a case of abscess in the loins, after opening which, he extracted a calculus as large as a pea."—*Ibid.*, vol. 3, p. 232.

p. 233.
"Collot saw Cresse incise a lumbar abscess, from which he removed a stone."—*Ibid.*, vol. 3, p. 225.

"Mr. Gregory Smith has seen three cases of abscess in the kidney, resulting from the presence of calculi in the organ. One of these cases was that of a patient who was admitted some years since, in a state of hectic, into St. George's Hospital. There was a large abscess pointing, and apparently about to burst in the lumbar region. Sir B. Brodie laid the abscess freely open, and on introducing his finger into the cavity, detected several loose bodies at the bottom of it; these, being removed by means of a small forceps, proved to be three calculi of the size of nutmegs."—London Lancet, 1839 and 1840, vol. 2, p. 449.

T. Spencer Wells makes the statement: "I have twice opened perirenal abscesses in the loin, and in one case removed a small renal calculus through the opening."—Dub. Quarterly Jour., Feb. 1867.

Nelaton, in the fifth volume of his *Elemens de Pathologie Chirur*gicale, records a case of the removal of a large renal calculus from an abscess, the opening of which was accomplished partly by

incision, and partly by caustic.

Thus, we find eleven cases recorded, in which abscesses communicating with disorganized kidneys, and containing calculi, have been opened and the calculi immediately extracted. Others have been reported, where the abscesses have been incised and the calculi removed, after varying intervals; but are omitted here, as not being cases in point. Such are the cases of Lafitte and Pouteau.

Another point raised in the recent discussion in the Academy, was as to the proper application of the term nephrotomy-the compiler of this paper taking the ground, that, although surgical writers generally sanction the use of the word in its widest sense, yet, as precision of meaning is so important in the statement of scientific facts, the word nephrotomy ought to be used only in its literal sense. As now used, the word is absolutely worthless for conveying any definite meaning; for under it we find indexed throughout surgical literature such cases as the opening of perirenal abscesses, the dilatation or enlargement of renal fistulæ, the extraction of calculi from abscesses, as in the cases quoted, and the total extirpation of the organ, as well as incisions into the true substance of the gland—the only cases to which the word ought to be applied. Perhaps the only value the word now possesses is in the convenience it affords for foisting on the profession an insignificant operation, under the dignified and high-sounding name of nephrotomy!

The writer is happy in being able to quote so high an authority as Rayer in support of the opinion he advanced on this point. The following extracts from that author's work show very satisfactorily his disapproval of the loose and vague use of the word, which includes, under nephrotomy, operations varying so widely

in character.

"Lafitte and Pouteau have practiced with success in similar conditions (that is, when an abscess exists which has had its origin in the kidneys), the opening of such abscesses. Not only have they been so fortunate as to effect a sensible improvement in the health of the patients after the evacuation of the pus, but also to extract the calculi which had been the cause of the inflammation. This operation has been followed by a complete cure. Nevertheless, I must remark that they have erroneously given the name of nephrotomy to the simple opening of an extra-renal abscess, the result of calculus pyelitis."—Rayer, vol. 3, p. 52.

This sentence occurs introducing the account of the operation

of Hippeau:

"Since then" (that is, the time when Hevin wrote upon nephrot-

omy, in the *Memoires de l'Academie Royale de Chirurgie*), "there have been several times cited, as examples of nephrotomy, cases of simple incision of abscesses of the loins proceeding from the kidneys. Such is the following reported by Hippeau, etc."—*Ibid.*, p. 236

p. 236.

"Several observations of lumbar abscesses proceeding from the kidneys, opened either with a cutting instrument or caustic, and whence renal calculi have been removed, have been also reported by Lafitte, and quoted erroneously as examples of nephrotomy."

-Ibid., p. 235.

After stating the opinions of various of the older surgeons in regard to the advisability of the operation of nephrotomy, Rayer continues thus: "I take this occasion to remark, that although the question of nephrotomy had been disputed, there was almost a perfect unanimity among surgeons and physicians of the highest authority, recommending the opening of lumbar abscesses proceeding from the kidneys, in order to give issue to pus and sometimes even to calculi."—Ibid., p. 222.

The foregoing quotations and remarks represent, substantially, the writer's comments and criticisms on the case reported in the Academy on the 26th October; and are directed solely to the statements then given of the operation and the amplification of those statements called out by the remarks then made. It is not intended to follow that case through its subsequent variations of

history.

My remarks were intended to apply to a case of lumbar abscess, resulting from chronic suppuration and degeneration of the kidney, caused by the presence of a calculus; and such a case as the original report made it appear to be.—Lancet and Observer.

On Night Diet.

Dr. Friedreich Betz (Memorabilien xvi, 4 p. 92, 1872) remarks

upon the subject of food as follows:

Very small children take food often, both day and night and at regular intervals, two or three hours apart. It is only later and gradually that the child begins to limit its meals to the daytime. Hunger is then experienced at certain times of the day; in the morning between 9 and 10, in the afternoon between 4 and 5 o'clock. At these periods the chief meals of the day should really be taken, but different circumstances have changed these times among most people. Food is then taken according to habit or time: whether this custom is perfectly safe or not must remain as yet an open question. At any rate the physiological periodicity of demand should be regarded as a main column in the temple of health.

But where digestion is rapid, where circumstances permit only smaller quantities, or where the body is changed by disease and the various metamorphoses are interfered with, there must be a change not only in the quantity and quality, but also in the time of administration. The exclusive ingestion of food by day is insufficient for the body in disease, and it becomes necessary, then, to feed the patient at night also. The manner in which it is to be taken, and the amount, are questions which may not be established by general law. Each case has its own requirements. Patients themselves do not often know how much they are reduced as inanition sometimes progresses very slowly, for instance, in chronic phthises; here, too, appetite becomes blunted. It is only by direct experimentation, thus, upon each case that the time, amount and frequency of food can be established. Yet it may be stated, in general terms, that the most appropriate time is between 9 and 10 in the evening and 1 and 3 in the morning. The character of the food is to be determined according to circumstances; it should be, in general, easily digestible food. Alcohol, opium and cod-liver oil may be of great utility at times.

The diseases which call for this supervision as to night food, are, besides the acute and chronic hemorrhages, bronchorrheas, suppurations, diarrheas, diabetic conditions, convalescence after exhausting diseases, inanition after nervous diseases, long continued hysterias, hypochondriases and other mental conditions; also in mental overwork, premature senility, inanition consecutive to chronic gastric catarrh, profuse sweatings, physical exhaustion,

infantile atrophy, dropsies, etc.

Inanition often occurs so insidiously that the patient himself is not aware of it. A most particularly valuable symptom indicative of its invasion is sleeplessness, in combat with which, alcohol is a remedy not to be underestimated. It is certainly true that some reduced patients are more or less somnolent; these patients, too, require nocturnal food.—Schmidt's Jahrbucher, Nov. 12, '72. The Clinic.

A Lumbricus Discharged through an Abscess about the Hip-Joint
—Recovery.

The following curious case occurred in the Mansfield Work-

house Infirmary in May last:

J. W., aged thirteen, was suffering from strumous disease of the hip-joint, but able to get about on crutches. The usual abscesses kept forming and bursting about the joint: one abscess, however, after bursting, discharged as part of its contents a large lumbricus, fully eighteen inches long, and coiled upon itself. How did it get there? At any rate, the wound healed rapidly, and the boy's health improved considerably.—Lancet, Nov. 30, 1872.

Editors' Book Table.

[Note. — All works reviewed in the columns of the Chicago Medical Journal may be found in the extensive stock of W. B. Keen, Cooke & Co., whose catalogue of Medical Books will be sent to any address upon request.]

BOOKS RECEIVED.

The Pharmacopæia of the United States of America. Fifth Decennial Revision. By authority of the National Convention for Revising the Pharmacopæia, held at Washington, A. D. 1870. Philadelphia: J. B. Lippincott & Co. 1873. Pp. 383. Cloth, \$1.75.

The present revision of the Pharmacopæia is more complete and extensive than we had supposed would be the case, and both physicians and druggists should procure this book and take appropriate note of changes. Twenty-four medicines have been added to the primary list, and three to the secondary. One substance is dropped from the primary and four from the secondary list. Eighty-two preparations have been added and seven omitted. As new classes we find Chartae (including Cantharides and Mustard paper), Glycerita, Suppositoria and Succi, which latter explain themselves. The new chemical nomenclature is adopted only to a limited extent, and numerous minor changes made necessary by advances or changes in chemistry have been introduced. The committee of ten have well performed their duty, and the publishers have brought out the book in their well-known neat and attractive style.

The Practice of Surgery. By Thomas Bryant, F.R.C.S., Surgeon to Guy's Hospital. With 507 illustrations. (8vo. Pp. 984. Extra cloth, \$6.25; Raised bands, leather, \$7.25.) Philadelphia: Henry C. Lea. 1873.

The vast experience and distinguished reputation of the author of this book, led us to anticipate a valuable, useful and practical work from his hands, and in this we are not disappointed in looking it over. The accumulated stores within the walls of "Guy's" having been placed freely at the disposal of the author, have enabled him to write ex cathedra with the authority of unusually

large experience. Although briefly entitled "The Practice of Surgery," it really embraces "large discourse" upon guiding principles. Most of the numerous illustrations are original, prepared expressly for this book. Taking it together, we commend it as a capital contribution to surgical literature, largely worthy of being added to the libraries of our readers.

Wohler's Outlines of Organic Chemistry. By RUDOLPH FITTIG, Ph. D., Nat. Sc. D., Professor of Chemistry in the University of Tubingen. Translated from the Eighth German Edition with additions, by IRA REMSEN, M.D., Ph. D., Professor of Chemistry and Physics in Williams College, Mass. Philadelphia: Henry C. Lea. 1873. Royal 12mo. Pp. 530. Extra cloth, \$3.00.

The number of editions of this work in Germany, attest the high repute it has gained as the leading text book and standard authority. The American edition receives the express approbation of the author, and in it will be found numerous additions and alterations, bringing it up to the latest date. As a work of reference it is invaluable, and by the forethought of the editor it is rendered more than usually so by the free use of large full-faced letters for each prominent article treated of.

Diseases of the Ovaries: their Diagnosis and Treatment. By T. Spencer Wells, Fellow and Member of the Royal College of Surgeons, England, Surgeon in ordinary to the Queen's Household, etc., etc., etc. New York: D. Appleton & Company, 549 & 551 Broadway. 1873. 8vo. Pp. 478.

This volume is issued simultaneously in London and New York, and may be considered as the very latest, as it is by far the most satisfactory, if not the best, exposition of the subject. It is clear, concise, thoroughly scientific, and yet practical. We advise every practitioner who has a case of ovarian disease under observation to buy and read this book. Incidentally we notice that Mr. Wells prefers as an anæsthetic chloro-methyl, or, as it is more commonly termed, the bichloride of methylene.

Parturition Without Pain: A Code of Directions for Escaping from the Primal Curse. Edited by M. L. HOLBROOK, M.D., Editor of the "Herald of Health." Third Edition, Enlarged. New York: Wood & Holbrook. 1872. 12mo. Pp. 147.

Surgical Diseases of Infants and Children. By M. P. GUERSANT, Honorary Surgeon of the Hopital des Enfants Malades, Paris; Honorary Member of the Societe de Chirurgie, etc. Translated from the French by RICHARD J. DUNGLISON, M.D. Philadelphia: Henry C. Lea. 1873. 8vo. Pp. 354. \$2.50.

Briefly, the results of twenty years service in the great Children's Hospital of Paris.

Obstetric Aphorisms: For the use of Students Commencing Midwifery Practice. By JOSEPH GRIFFITHS SWAYNE, M.D., Physician Accoucheur to the Bristol General Hospital, and Lecturer on Obstetric Medicine at the Bristol Medical School. Second American from the Fifth Revised English Edition, with Additions. By EDWARD R. HUTCHINS, M.D. Philadelphia: Henry C. Lea. 1873. 12mo. Pp. 189.

This little manual has secured, as we prophesied on its first appearance, deserved popularity.

PAMPHLETS, ETC.

Faticide or Criminal Abortion: A Lecture Introductory to the Course on Obstetrics and Diseases of Women and Children, University of Pennsylvania. By Hugh L. Hodge, M.D. Fourth Edition. Philadelphia: Lindsay & Blakiston. 1872. Paper, 30 cts.; Cloth, 50 cts.

Much good may be done by the further circulation of this lecture.

- Braithwaite's Restrospect of Practical Medicine and Surgery. Part LXVI. January, 1873. Uniform American Edition. New York: W. A. Townshend, Publisher. \$2.50 a year, in advance, Postage Prepaid. Half Yearly Parts, \$1.50.
- The Journal of Anatomy and Physiology. Conducted by G. M. HUMPHREY, M.D., F.R.S., Prof., etc., and by WM. TURNER, M.B., Prof., etc. Second Series. No. XI. November, 1872. Macmillan & Co., Cambridge, London and New York. 8vo. Paper. Pp. 200; and seven pages of lithograph plates. \$1.75.
- Transactions of the Wisconsin State Medical Society. 1872. With the Constitution, By-Laws, and List of Members. Pp. 168.
- Transactions of the New Hampshire Medical Society. Eighty-Second Anniversary. Held at Concord, June 11th and 12th, 1872. Pp. 96.

- Transactions of the Medical Society of the State of West Virginia, instituted April 10th, 1867. Pp. 100.
- Chronic Urethral Discharge. By C. H. MASTIN, M.D., Mobile, Ala. Read before the Alabama Medical Association. 1872. Pp. 32.
- The Natural Cure of Disease. Synopsis of a Lecture by Prof. SAMUEL G. ARMOR, M.D.

Editorial.

Our Publishers

Are "home again" in their new quarters, but the old location before the fire—in statu quo ante ignem—and we were about preparing an account of the same, when we happened upon this extract from the correspondence of the Weekly Trade Circular of New York, which we reproduce and indorse, and to which we add "the half has not been told," and if, then, anybody is incredulous, let him "come and see." Chicago (our Publishers and Printers inclusive) has seen fiery tribulations, compared to which ancient Job's were a bagatelle, but like him its latter days are getting to be its best days.

"Messrs. Keen, Cooke & Co. are now taking the lead here in the general book trade. This is due, in a large measure, to their wise policy in providing themselves with spacious and convenient quarters immediately after the fire, and thus having the stock room, and will to do all the business that came to them at a time when the other dealers were unfortunately crowded into narrow and confined space. The result of the fire, therefore, has been rather to widely extend and stimulate their business than to cripple it. The retirement of Messrs. S. C. Griggs & Co. from the trade has also, no doubt, had its influence. Messrs. Keen, Cooke & Co. have just removed from their temporary quarters, corner Washington street and Wabash avenue, to their old stand, 113 and 115 State street, but into a new building, and, as compared with the old one, much more elegant and convenient in every respect. The building is one of the finest marble fronts in the city, and is known as the Williams & Ferry Building. It was planned with special reference to the book trade, and the five stories are shared by Messrs. Keen, Cooke & Co. with Messrs. A. S. Barnes & Co. The retail department, on the first floor, occupies space 50 by 150 feet, and is beautifully and systematically arranged, the shelves on either side being apportioned according to their respective importance to the various American and foreign publishers, and the books therein being alphabetically arranged so that every clerk can lay his hand on any book even in the dark. Busts of prominent authors, ancient and modern, appropriately adorn and dignify these separate alcoves. The room is lighted with reflectors a la Ball & Black's in New York, and all other appurtenances are of like appropriateness and elegance. The basement is 50 by 200, and exclusively devoted to school books, stationery, inks, etc. The second story is used for small stationery and as a packing room. All the several departments are connected and communicated with by a steam elevator as well as by spacious stairways.

"Altogether the establishment presents a very attractive appearance, whether to the lover or purchaser of books, and excels, in outward appearance at least, anything we have ever had in Chicago in the way of a book store."

A Movement in the Right Direction.

We notice that the proprietors of the well-known Crystal Springs (Yates Co., N. Y.), instead of prostituting the curative value of their mineral springs by establishing a "water cure," under the management of some blatant pathist, with a wider and more rational view of the real relations of mineral waters to therapeutics, have secured the advice and attendance of a physician of acknowledged ability, professional learning and experience, W. R. Marsh, M.D.; for many years occupying a chair in the Iowa Medical College at Keokuk, and during the whole of the late war serving as regimental and staff surgeon in the U.S. Army. The state of Dr. Marsh's health having obliged him to retire, at least temporarily, from general practice in this city, where he has been located since the close of the war, he has entered upon the duties of this position, determined that there shall be at least one resort for invalids, where physicians may send them without fear of blundering incapacity or bald quackery in treatment.

We cordially recommend the example set by the proprietors of the Crystal Springs to similar establishments throughout the country. Let us have these powerful adjuvants to the treatment of disease, everywhere put under enlightened control.

Civil Malpractice.

In the present No. of the Journal is commenced an elaborate article on this subject which we cordially commend to the careful perusal of our readers. Such of our legal friends as have looked it over in advance sheets speak highly of its merits, and we are sure our professional brethren will cordially indorse their opinion. It covers a space which the valuable work of Elwell does not embrace.

Original Communications

Are solicited from our professional friends, but we must decline to insert them as such when previously sent to other medical journals, or especially to non-professional periodicals.

The Annual Commencement of Rush Medical College will take place at Central Hall, corner of Wabash avenue and Twenty-second street, on Wednesday, February 19th, at 8 P.M. The Valedictory Address will be delivered by Prof. Walter Hay.

A Bill to Promote the Science of Medicine and Surgery in the State of Illinois.

Section 1. It shall be lawful in cities and counties whose population exceeds twenty thousand inhabitants, for superintendents of penitentiaries, wardens of poorhouses, coroners and city undertakers, to deliver to the professors and teachers in medical colleges and schools in this State, and for professors and teachers to receive, the remains or body of any deceased person, for purposes of medical and surgical study: provided, that said remains shall not have been regularly interred, and shall not have been desired for interment by any relative or friend of said deceased, within twenty-four hours after death: provided, also, that the remains of no person who may be known to have relatives or friends shall be so delivered or received without the consent of said relatives or friends: and provided, that the remains of no one detained for debt, or as a witness, or on suspicion of crime, or of any traveler, or of any person who shall have expressed a desire in his or her last sickness that his or her body may be interred, shall be delivered or received as aforesaid, but shall be buried in the usual manner: and provided, also, that in case the remains of any person so delivered or received shall be subsequently claimed by any surviving relative or friend, they shall be given up to said relative or friend for interment.

SEC. 2. And it shall be the duty of the said professors and teachers decently to bury in some public cemetery, the remains of all bodies after they shall have answered the purposes of study aforesaid; and for any neglect or violation of the provisions of this act, the party so neglecting shall forfeit and pay a penalty of not less than twenty-five nor more than fifty dollars, to be sued for by the health officers of said cities, or other places, for the benefit of their department.

SEC. 3. The remains or bodies of said persons as may be so received by the professors and teachers, as aforesaid, shall be used for the purposes of medical and surgical study alone, and in this State only; and whoever shall use such remains for any other purpose, or shall remove such remains beyond the limits of this State, or in any manner traffic in the same, shall be deemed guilty of a misdemeanor, and shall, on conviction, be imprisoned for a term not exceeding one year in a county jail.

SEC. 4. Every person who shall deliver up the remains of any deceased person in violation of, or contrary to, any or all of the provisions contained in the first section of this act, and every person who shall receive said remains, knowing the same to have been delivered contrary to any of the provisions of said section, shall each and every of them be deemed guilty of a misdemeanor, and shall, on conviction, be imprisoned for a term not exceeding two years in a county jail.

Married.

On Jan. 14th, at Hillside, the residence of John T. Graham, Mt. Washington, Md., by Rev. R. H. Clarkson, Bishop of Nebraska, Dr. P. H. ELLSWORTH, of Hot Springs, Ark., to SARAH E., eldest daughter of Dr. C. H. Van Patten, of San Jose, Costa Rica, formerly of Washington, D. C. No cards.

The Editors congratulate.

The Central Illinois Medical Society

Met in regular session in Bloomington, January 14, 1873. Society was called to order at 10 A. M. by Dr. J. Wright, President.

On motion, the reading of the minutes of the preceding meeting was post-

poned till the afternoon session.

On motion of Dr. Laughlin. the regular order of business was suspended and the society proceeded to the election of the following members, recommended by Dr. R. G. Laughlin:

T. F. Worrell, M.D.; J. L. White, M.D.; D. L. Crist, M.D.; D. C. Moore, M.D.; H. C. Luce, M.D.; N. B. Cole, M.D., of Bloomington, and W. L. Pollock, M.D., of Heyworth.

On motion, adjourned till two P. M.

AFTERNOON SESSION.

Called to order by President Wright.

Minutes of previous meeting read and approved.

On recommendation of Dr. Laughlin, L. Asire, M.D., of Bloomington, and J. Little, M.D., of LeRoy, were elected members of the society.

On motion, Dr. J. J. Starkey, of Louisville Medical College, was invited to participate in the proceedings of the society.

Dr. W. Hill, of committee on surgery, made a valuable and very interesting report on lithotomy, criticising very severely some of the modern modes of operating.

Recommended by Dr. Tenney, Dr. I.ee Smith, of Rush Medical College, was elected a member of the society.

Dr. S. H. Birney, chairman of committee on obstetrics and diseases of females, read a very interesting essay on diseases of females. The production was a valuable one, and of great credit to its author.

On motion, Dr. Hill and Dr. Birney were requested to furnish copies of the reports for publication in the Chicago Medical Journal.

On motion of Dr. Laughlin, the publishing committee were instructed to have one hundred copies of the constitution and by-laws printed.

Delegates to State Medical Society.—Drs. S. H. Birney, W. G. Cochran, C. T. Orner, and W. L. Pollock.

Delegates to American Medical Association.—Drs. H. C. Luce, C. Goodbrake, S. H. Birney, J. Little, G. W. Barton, John Clouser, and W. Hill. On motion, adjourned till seven P. M.

Called to order by Dr. Wright, President.

Dr. Laughlin, chairman of the committee on practical medicine, made a practical and very interesting report on the diseases prevalent in this country since the last meeting of the society. The report enlisted a lively discussion, and the doctor was requested to furnish copies for publication in the Chicago Medical

Dr. J. L. White, of Bloomington, delivered a very interesting address. Although prepared for the public it was very interesting to the society, and a vote of thanks was tendered the doctor for his valuable production.

The President announced the following special committees:

Surgery.—Drs. H. C. Luce, C. Goodbrake, and S. H. Birney.

Practical Medicine.—Drs. J. T. Pearman, Z. H. Madden, and G. W. Barton.

Obstetrics and Diseases of Females.—Drs. M. S. Brown, A. P. Tenney, and J. H. Potter.

Pathology-Dr. C. T. Orner. Microscopy.-Dr. R. D. Bradley.

Eye and Ear .- Drs. N. B. Dole, H. C. Howard, and R. H. Huddleton. Committee of Arrangements.-Drs. S. H. Birney, J. T. Pearman, and H. C.

Howard.

Very interesting verbal reports were made by Drs. Worrell, Orner, and

The following resolution was unanimously adopted:

Resolved, That the thanks of the society are due to the committee of arrangements, the physicians of the city, the authorities of the county, and the trustees of the First Methodist Church, for kind care and hospitalities shown us while meeting within their midst.

On motion, the Secretary was instructed to furnish copies of the proceedings for publication in the county papers.

On motion, adjourned to meet in Champaign the second Tuesday in June,

1873.

Notwithstanding this was the first meeting of the society since its organization,
Notwithstanding this was the first meeting of the society since its organization,
Notwithstanding this was the first meeting of the society since its organization, it was well attended and the greatest interest manifested. We expect, however, to have a still more interesting time at our next meeting in Champaign, where we hope to meet all the physicians of the central portion of the State, and every one surcharged with "medical news."

W. G. COCHRAN, Sec'y.